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# THE SURVEY

Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.

Vol. 4.

Washington, D. C., January 11, 1923.

No. 1.

## TO ALL MEMBERS OF THE BIOLOGICAL SURVEY:

An appropriate occasion is offered me in this, the first issue of a new volume of THE SURVEY, to join the Secretary, so far as our own unit is concerned, in a New Year's greeting to our people. The impossibility of gathering together our widely scattered members makes evident the need of some regular medium of contact. This is furnished in the pages of THE SURVEY, which now enters upon its fourth year of service. Expressing the hope that the new year will be one of happiness and prosperity for all members of the Biological Survey, including their families, I am

Sincerely yours,

Washington, D. C.  
January 2, 1923.

*E. W. Nelson*  
Chief of Bureau.

## GENERAL NOTES

The following Committee on THE SURVEY has been designated for the year 1923: Dr. W. B. Bell, chairman, representing Economic Investigations; W. C. Henderson, representing the Bureau as a whole; Edward A. Preble, Biological Investigations; W. F. Bancroft, Alaska Investigations; E. R. Kalmbach, Food Habits Research; Smith Riley, Game and Bird Reservations; Dr. T. S. Palmer, Importations; W. Roy Dillon, Migratory-Bird Treaty and Lacey Acts; Wm. H. Cheesman, Editor.

The Biological Survey was represented at the Cambridge meeting of the American Association for the Advancement of Science, December 26 to 30, by E. A. Goldman, Dr. W. B. Bell, and Dr. H. H. T. Jackson. Mr. Goldman presented a paper by Doctor Nelson on "The Economic Importance of Wild Life."

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After an illness of more than a month, contracted during his western trip, Doctor Nelson is sufficiently recovered to be able to carry on much of the routine business requiring his attention, although he has been confined to his rooms for the greater part of the period.

The net response of the Biological Survey to the President's desire for retrenchment in government expenditures for the past fiscal year amounted to \$14,600. Of the budget reserve of \$32,100 set aside at the beginning of the year emergencies made it necessary to use \$21,500 in controlling an outbreak of rabies in the Northwest, which ordinarily would have necessitated a deficiency appropriation, and in work in Alaska for the protection of the land fur animals and for the welfare of the reindeer herds. The budget reserve balance of \$10,600 was augmented by approximately \$4,000 additional savings, unexpended balances of appropriations, resulting from economies practiced both in the Washington offices and in the field. The Secretary expressed his gratification at the response made and asks that records be kept throughout the Department of similar economies during the current year, that the final report may be even more satisfactory.

The Agricultural appropriation bill, as it passed the House of Representatives on January 3 and went to the Senate, carries a total for the Biological Survey of \$872,265, an increase of \$31,640 over the amount recommended by the Bureau of the Budget, and practically the same amount as for the current fiscal year.

The following publications of the Bureau were received in December: Annual Report of the Chief of Bureau, 1922. December 8.  
Farmers' Bulletin 621 (rev.), How to Attract Birds in Northeastern United States, by W. L. McAtee. December 7 ("issued, April, 1922").  
Farmers' Bulletin 844 (rev.), How to Attract Birds in the Middle Atlantic States, by W. L. McAtee. December 8 ("issued, August, 1922").

Among manuscripts approved in December for outside publication were: Ashbrook, Frank G., "Work of the Biological Survey Relating to Fur Bearing Animals," for the Fur Trade Review.  
Day, A. M., "Rodent Control in Star Valley, Wyoming," for the Wyoming Stockman-Farmer.  
Malloch, J. R., "A New Character for Differentiating the Families of Muscoidea," for Entomological News.  
Walker, Ernest P., "The Work of the Biological Survey in Alaska," for the Alaska School Bulletin.

#### BIOLOGICAL INVESTIGATIONS

F. C. Lincoln returned to Washington on December 15 after completing bird banding at the Sanganois Club, at Browning, Ill., in the course of which he trapped and banded 1,338 ducks, mostly mallards, but also many black ducks and pintails. A large number of "returns" from these birds have already been received, which will no doubt prove of much value in studying the subsequent movements of the birds that were feeding on the grounds of the Sanganois Club.

On the return trip, Mr. Lincoln stopped at Waukegan, Ill., for a



conference with Wm. I. Lyon, the secretary of the new Inland Bird Banding Association, and also at Cleveland, Ohio, for a similar meeting with S. Prentiss Baldwin, president of the organization. This association was formed at the A. O. U. meeting in Chicago, in order to give better cooperation to the Bureau in bird banding work, and to give particular attention to a study of the birds that follow the Mississippi Valley flyway.

At Indianapolis, Ind., Mr. Lincoln spoke before the Nature Study Club of Indiana on the subject of bird banding. A record attendance was reported and a great deal of interest shown in the work. The meeting was arranged by S. E. Perkins, III, who is our most active bird banding cooperator in that region.

Edward A. Preble, W. L. McAtee, and Alexander Wetmore, following their custom of former years, made a Christmas census of birds on December 23. Their usual field of operations, the country between the head of Dogue Creek and Dyke, Va., was covered on foot, between 8 a. m. and about sunset. Forty-two species, a fair number for such a trip at this season, were observed. While the list included no rare or unexpected species, the large number of ducks discovered, especially scaups, or bluebills, and canvasbacks, was very gratifying.

#### ALASKA INVESTIGATIONS

The annual report of Gov. Scott C. Bone on the Alaska game law for the fiscal year ended June 30, 1922, has been received and is now in press.

The Bureau's seagoing power boat Sea Otter, stationed at Juneau, and used in patrol work in enforcing the fur law, will be taken to Seattle the latter part of this month for a general overhauling and necessary repairs which can not readily be done in the Territory.

Walter G. Culver, of Juneau, who has been assisting Chief Fur Warden Walker in enforcing the fur law and regulations in Southeastern Alaska, has been appointed fur warden, effective December 1, 1922. He will make his headquarters with Mr. Walker for the present.

The Northwestern Fur, Fish, and Game Protection Association has been organized at Nome with a membership of 50 local citizens interested in the proper conservation of game and fish in that region. Fur Warden Frank Dufresne was largely instrumental in perfecting the organization.

L. J. Palmer, assistant in charge of reindeer grazing investigations, with headquarters at Nome, reports that at Pimiktalik, Pastolik, and Unalakleet many bears were seen during the summer and that they were bothering the herds, having killed many reindeer. The bears travel in companies of three and five and are particularly active in spring.

A shipment of 572 carcasses of reindeer was made from Nome, Alaska, on the last boat leaving for the States the latter part of October. The total weight of the carcasses amounted to 90,624 pounds, averaging a fraction over 158 pounds each. These animals had been killed by a private company and the carcasses were prepared for shipment at a cold storage plant on Golovin Bay.





Keen competition among the leading fur buyers of the States for the millions of dollars worth of pelts coming from Alaska each year has been instrumental in the recent organization at Seattle, Wash., of the Seattle Fur Exchange, which is sponsored by the Chamber of Commerce and a number of prominent financial men of that city. Practically four-fifths of the furs coming from Alaska pass through the port of Seattle, and the new fur exchange will probably be viewed with interest by fur buyers throughout the country.

Chief Fur Warden Walker is working on plans for introducing fur-bearing and game animals on islands in Southeastern Alaska, where they either have never occurred or have been exterminated. It is proposed to stock certain islands with rabbits as food for fur bearers and man; to stock the Prince of Wales group with martens, which have never occurred there; and to restock Chichagof and Baranof Islands with beavers, which were exterminated there many years ago. Minks will be introduced on Kodiak and Afognak Islands, where they have never occurred. The introduction of elk on Kruzof Island, and on Montague Island in Prince William Sound, is also being considered.

#### ECONOMIC INVESTIGATIONS

Doctor Fisher attended a meeting of the Boone and Crocket Club in New York City on December 20.

James Silver and Carlyle Carr conducted a very successful anti-rat campaign in Georgia during December. Preliminary organization work and a State-wide publicity campaign were conducted in cooperation with the Extension Service of the State Agricultural College. Satisfactory results are reported both in number of rats killed and in the interest aroused in making conditions less favorable for these pests by eliminating sources of food and harborage, and by the rat-proof construction or repair of buildings. It is planned to follow up the drives from time to time as required to control the rats effectively. During the month also preliminary conferences were held with representatives of the Extension Service of Virginia and a similar State-wide anti-rat campaign was arranged for January. Messrs. Silver and Carr will be engaged on this campaign in Virginia during practically all of January.

Frank G. Ashbrook and Dr. Karl B. Hanson report that the annual fox show held at Muskegon, Mich., by the National Silver Fox Breeders Association of America, December 6 to 9, was very successful, representing a marked improvement over previous undertakings of this kind. Mr. Ashbrook and Dr. Hanson read papers before the meetings held in connection with the show. Both availed themselves of the opportunity afforded to consult with exhibitors and fox breeders and to visit a number of fox farms. Mr. Ashbrook also attended the International Livestock Exposition at Chicago and the Annual Meeting of the Society of Animal Production held in connection therewith.

Dr. W. B. Bell attended the meeting of the Association of Agricultural Colleges and Experiment Stations during the latter part of November, and early in December the meetings of the Commissioners and Secretaries of



Agriculture which were held in Washington. These meetings afforded opportunity to obtain much information of value regarding requirements of control measures against destructive animals in the various States and to get the viewpoint of the State representatives regarding results being accomplished in field operations.

Dr. Glenn R. Bach and Stanley G. Jewett have been authorized to attend a meeting of the Washington State Wool Growers' Association at Spokane, Wash., January 22 and 23.

Messrs. Gilchrist, Musgrave, Pool, and Garlough have been authorized to attend a meeting of the American National Live Stock Association to be held at Los Angeles, Calif., January 30 to February 1.

#### FOOD HABITS RESEARCH

Additions to the bird stomach collection numbered 2,942, in the course of the calendar year 1922, bringing the total up to 166,097. Of this number 87,794 have been examined. For the past ten years the proportion of examined stomachs has been about half the total in the collection.

Work has recently been completed by C. C. Sperry on the analysis of 96 stomachs of grasshopper mice (*Onychomys*), revealing the highly insectivorous habits of these rodents. Their vegetable food, about one-ninth of the total, consisted principally of seeds of grasses and grain. A report on the life habits and food of these mice is being prepared for publication as a professional paper.

#### GAME AND BIRD RESERVATIONS

George M. Riddick, warden of the Big Lake Reservation, Ark., reports more ducks than ever before seen by him at the refuge during the first two weeks in December. About 100 canvasbacks were observed in the flight of ducks on December 13.

W. E. Brooks, warden of Dungeness Spit Reservation, Wash., writes that there are many canvasbacks at that refuge this season.

Ducks in large numbers and many loons have been reported in the vicinity of the Tampa Bay Reservations, Florida.

At the November term of the Federal Court of Jonesboro, Ark., fines of \$10 each were assessed against two violators for shooting on Big Lake Reservation.

George M. Benson, warden of Lake Malheur Reservation, Oreg., advises that on December 4 most of the ducks had left the refuge; that the geese were still there; and that thousands of swans were leaving on December 8.

At Sullys Hill Game Preserve, N. Dak., an elk corral has been constructed and the elk are now feeding in it. The purpose of this corral is to separate for shipment such animals as it is found advisable to dispose of when the increase has reached the maximum number that the range will support satisfactorily.





Nineteen coyotes were poisoned and trapped up to and including December 28, by a trapper and hunter assigned to the National Bison Range, Mont.

The latest information received from the Elk Refuge, Jackson Hole, Wyo., is that there are approximately 2,500 elk there and that the animals are in fine condition, with plenty of pasturage still available. The weather continues mild in that vicinity.

Almer P. Nelson, formerly a State game warden, has been appointed to take charge of the Elk Refuge for several months.

Grouse are said to be flocking close to the buildings in considerable numbers at the Niobrara Reservation, Nebr. - the small cornfield on the preserve being covered with the birds in the early mornings - and there is a morning and evening flight from the reserve centers to the adjacent cultivated fields. Two of the elk in the herd at Niobrara died in December.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

Mr. Lawyer returned to the Washington office, December 12, after an extended official trip in the Western States. From California he went direct to New York City, where he attended the National Game Conference on December 11, returning to Washington immediately after the close of this meeting.

The annual meeting of the Advisory Board, Migratory Bird Treaty Act, was held on December 14 at the Cosmos Club, Washington, D. C., for the purpose of considering proposed changes in the regulations under the act. Sixteen members of the Board were in attendance. Action has not yet been taken by the Secretary on the recommendations made.

Mr. Lawyer attended and addressed a meeting of sportsmen at Charlotte, N.C., on December 28. Following his address on the need for State-wide laws for the protection of game, the North Carolina State Game and Fish Development League was formed. Mr. Lawyer told the sportsmen assembled that North Carolina was 25 years behind other States in the matter of caring for its wild life, but added that there was still time to take conservation measures, the State being so happily situated for game to breed, with an abundance of natural cover and a comparatively scattered human population. Judge W. F. Harding, one of the speakers, told of the abundance of game 20 and 30 years ago and said that efforts had apparently been directed toward exterminating everything from bear to the boll weevil, and that there had been better success with the former than with the latter. There was evident an enthusiastic determination to institute legislative action for State-wide game protection, instead of depending upon county officials and The Audubon Society as in the past. The bill pending in Congress, which has passed the Senate, to create public shooting grounds and provide a Federal hunting license was indorsed, and the first steps taken toward the creation of a State department of game and fish and the enactment of a State-wide game and fish law. Mr. Lawyer's address was broadcast by radio and was picked up in many newspaper offices and homes throughout the State.



The following appointments were made to the position of U. S. deputy game warden during December:

Dr. Harry C. Oberholser, Biological Survey, Washington, D.C.  
Robert Messa, St. Bernard, La.  
James Chadwick, P.O. Box 563, Fernandina, Fla.  
Sturtevant Erdmann, 60 West 52d St., New York, N. Y.  
Herman O. Price, 1807 State St., Little Rock, Ark.

The appointment of Harry L. Applegate of Kosmosdale, Ky., as U. S. deputy game warden was terminated during December.



## Migratory Bird Treaty Act Cases Terminated - Reports Received during December.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier	1	Missouri	Selling ducks	\$5
"	1	"	Possessing ducks in storage during close season	\$1 and costs of \$15.05
"	1	"	Possessing ducks in storage during close season	\$1 and costs of \$14.91
"	3	"	Possessing wood duck	\$1 and costs of \$12.75
Birsch and Farnham	2	Georgia	Killing doves in close season	\$5 each
Bloxson	1	Maryland	Killing sandpipers	\$10
"	3	"	Killing sandpipers	\$10 each and costs
Hoffman	4	Alabama	Killing doves in close season	\$10 each
"	1	Florida	Killing doves in close season	\$50 and costs
Hoffman and Oberhaus*	2	Alabama	Hunting coot from motorboat	\$5 each
Holmes	1	Missouri	Hunting ducks from motorboat	\$1 and costs of \$17.21
Merrill	1	Illinois	Killing ducks in close season	\$25 and costs of \$16.47
"	1	"	Possessing ducks in storage in close season	\$25 and costs of \$16.25
Ransom	1	Idaho	Killing grebes	\$5
"	1	"	Hunting ducks after sunset	\$10
Riddick*and Visart	1	Arkansas	Selling ducks	\$10
Smith	3	Maine	Killing wood ducks	\$20 each
"	1	"	Killing wood ducks	\$25
"	1	"	Killing sandpipers	\$10
Steele	2	Washington	Killing ducks in close season	\$10 each
"	1	"	Killing band-tailed pigeons	\$25
"	1	"	Killing band-tailed pigeons	\$15
Tonkin	2	Oregon	Killing ducks in close season	\$10 each
Whitehead	1	Georgia	Killing doves in close season	\$5
"	11	"	Killing doves in close season	\$10 each
"	6	"	Killing doves in close season	\$20 each
"	10	"	Killing doves in close season	\$25 each
"	1	"	Killing doves in close season	\$40

\* U. S. Deputy Game Warden

No cases were transmitted to the Solicitor for prosecution during the month.





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Vol. 4

Washington, D. C., February 17, 1923

No. 2

Doctor Nelson was in New York City conferring with officials of the American Museum of Natural History, during the last few days of January, perfecting plans for a cooperative scientific expedition to the islands within and in the vicinity of the Hawaiian Islands National Bird Reservation. The work will be carried on in cooperation with the Bishop Museum, of Honolulu, and the American Museum of Natural History, of New York. The Navy Department will cooperate by furnishing a 1,000-ton vessel for conducting the party from Honolulu to the various islands.

The magnitude of the expedition's task may be appreciated when it is understood that the Hawaiian Islands Reservation consists of a dozen or more islands, reefs, and shoals that stretch westward from the Hawaiian Archipelago proper for a distance of more than 1,500 miles toward Japan, and that the average distance between these is something like 100 miles.

Included in the refuge is Laysan Island, celebrated as a breeding place for albatrosses and other sea birds, where in the past plumage hunters of other nations have committed serious depredations. Domestic rabbits were introduced on this island some years ago by a German who was then living there. The increase of these animals threatens to destroy the scanty vegetation of the island, and with its disappearance several species of small land birds peculiar to Laysan would perish.

Dr. Alexander Wetmore, of the Division of Biological Investigations of this Bureau, will be in charge of the expedition, and Charles E. Reno, of Economic Investigations, will accompany him as his assistant and endeavor to exterminate the rabbits.

The fourth semiannual meeting of the Business Organization of the Government was held in Memorial Continental Hall on the afternoon of January 29. In the absence of President Harding, the meeting was presided over by Vice-President Coolidge, who read the address of the President. General H. M. Lord, Director of the Bureau of the Budget, also addressed the meeting at length, reviewing the work of his Bureau and advising as to the financial situation of the Government at the present time. The final estimates of expenditure for the present fiscal year, compared with the most recent forecasts of receipts, indicate a possible deficit of nearly \$100,000,000 -- this being a considerable reduction in the estimated deficit made earlier in the year. Doctor Nelson was away from the city at the time and unable to attend the meeting. Representatives from the Bureau who attended were W. C. Henderson, Mrs. A. B. Morrison, E. J. Thompson, W. R. Dillon, and E. J. Cohnan.

A short article on page 4 of The Official Record for January 31, entitled "Have you done your bit?" is deserving of special notice within this Bureau. The Biological Survey is well represented in the Record, but an appeal is made, along the lines of the article, to all employees to remember THE SURVEY with notes, suggestions, and other items that will tend to make our "house-organ" representative of the Bureau. Such matter should be handed in through the divisional representatives, whose names appeared in last month's issue.





The sympathy of his associates in the Washington office is extended to Louis Klein, in Charge of Mails and Files, in the death of his sister, Mrs. Harriet Colin, which occurred in Washington, D. C., January 20.

The following publications of the Bureau were received in January:

Farmers' Bulletin 506 (Rev.), "Food of Some Well-Known Birds of Forest, Farm and Garden." Jan. 18 ("Issued, Sept. 1922.")  
Service and Regulatory Announcements Nos. 51 and 52, "Regulations for the Protection of Land Fur-bearing Animals in Alaska." Amendment. Jan. 4 and 24.

Among manuscripts submitted for outside publication in January were:

Cooke, May T. "Bird Banders and the Bird Census," for the Wilson Bulletin.  
Gabrielson, Ira N. "Notes on Thomomys in Oregon," for the Journal of Mammalogy.  
Jackson, H. H. T. "Review of Thomson's Outlines of Zoology," for the Journal of Mammalogy.  
McAtee, W. L., "Uses for Evergreens on Golf Courses," for Bulletin of the Green Section, U. S. Golf Association.  
-----"The Coastal Plain Element in the Flora of the Great Lakes," for Rhodora.  
-----"Tingitoidae (Heteroptera) of the Vicinity of Washington, D. C.," for Proceedings Entomological Society of Washington.  
-----"A New Species of Otcocerus (Homoptera: Fulgoridae), "for Proceedings Biological Society of Washington.  
McAtee, W. L., and J. R. Malloch, "District of Columbia Diptera: Sciomyzidae," for Entomological News.  
Oberholser, Harry C. "October and November Birds at Washington, D. C.," for Bird Lore.  
-----"The Status of the Name Ortyx douglasii Douglas," for The Condor.  
Scheffer, Thos. H., "Reckoning with the Beaver," for the Wisconsin Conservationist.  
Walker, Ernest P., "The Work of the Biological Survey in Alaska," for the Alaska School Bulletin.

#### BIOLOGICAL INVESTIGATIONS

E. A. Goldman attended the Twelfth Annual Forestry Convention, at Pinehurst, N. C., January 23-24, and gave an address on the relationship between forests and wild-animal life. The convention was held under the auspices of the Geological and Economic Survey and the Forestry Association of the State.

The period from January 24 to January 31 was spent by F. C. Lincoln near Oakley, S. C., investigating the possibilities of a large plantation as a bird-banding station. As a result the owner of this property plans to undertake the trapping and banding of waterfowl as well as small land birds during the coming season.



Donald R. Dickey, well-known California naturalist and prominent wild-life motion-picture photographer, was a visitor in the offices of the Bureau in the early part of February. He lectured before the National Geographic Society on February 9 on the wild life of New Brunswick, his address being illustrated with motion pictures of moose, deer, and other native life of the region.

### ALASKA INVESTIGATIONS

Frank Dufresne, fur warden stationed at Nome, is making an inspection trip of the Kuskokwim region, touching at McGrath, Holy Cross, and Bethel--all important trapping centers.

W. G. Culver, fur warden stationed at Juneau, is making an inspection trip, with particular reference to the protection of land fur-bearing animals, in the Kenai Peninsula. While there he will report on the condition of wild game in general, including moose.

The value of skins of land fur-bearing animals shipped from Alaska during the period December 1, 1921, to November 30, 1922, amounted to more than \$1,300,000; the skins included blue and white foxes from the Pribilof Islands, under the jurisdiction of the Bureau of Fisheries. The total number of skins shipped was 394,514 - muskrat skins leading, with 313,145; mink came next, with 31,983 skins; beaver, 12,216; weasel (ermine), 10,656; marten, 10,385; red fox, 5,979; white fox, 4,414; and cross fox, 740. This is a record year for shipments of furs from the Territory.

In order to prevent poaching, and at the request of the blue fox farmers of central and southeastern Alaska, a new regulation was promulgated on January 9 by the Secretary, which prohibits the killing of blue foxes at any time in District 1, except on the Aleutian Islands Reservation, and in District 2 south of the 62d parallel, but with the provision that owners, lessees, or permittees, or their duly authorized agents, of islands or lands used and maintained as fur farms for the propagation of blue foxes, may kill blue foxes owned, propagated, or stocked by them at any time.

While the Bureau's sea-going power schooner Sea Otter was proceeding from McCloud Bay to Ham Bay on the afternoon of January 8, an accident occurred which, but for the prompt action of Capt. K. C. Talmage and his assistant, Fred Lewis, might have resulted in the destruction of the boat by fire and the loss of the lives of all on board, including Predatory Animal Inspector J. S. Ligon and Geo. Hamilton, of Craig. When attempt was made to repair a choked gas feed pipe, the engine back-fired, setting fire to the engine room. Captain Talmage seized one fire extinguisher and emptied its contents on the flames, while Mr. Lewis quickly took another. Had the fire reached the gas tanks there would have been a disastrous explosion. Happily, however, the flames were subdued, but it was with considerable difficulty that Captain Talmage escaped from the engine room because of the deadly gas fumes. - Difficulty was also experienced in reaching a port on account of a heavy sea running at the time. Doctor Nelson has written a letter to Captain Talmage, expressing his appreciation of the prompt action taken by him





and his assistant, Mr. Lewis.

### ECONOMIC INVESTIGATIONS

Doctor Fisher, who was severely injured on January 7, when a limb of a falling tree struck him on the head, has fully recovered and, in his usual good health, is again able to resume his duties.

Dr. W. B. Bell left Washington on January 20 to attend the 58th Annual Meeting of the National Wool Growers' Association, at Spokane, Wash., and give an address on "Cooperation in Protecting Livestock from Predatory Animals." Dr. Glenn R. Bach and Stanley G. Jewett attended the meeting as official representatives of the predatory animal work, and Ira N. Gabrielson, Leo K. Couch, and Harold Dobyns came to Spokane to confer with Doctor Bell. A most interesting and helpful meeting is reported, and gratifying interest and support of the predatory animal work was manifest. Resolutions and the report of the predatory animal committee adopted by the Association strongly endorsed the work of the Bureau and urged more adequate cooperation on the part of the Western States.

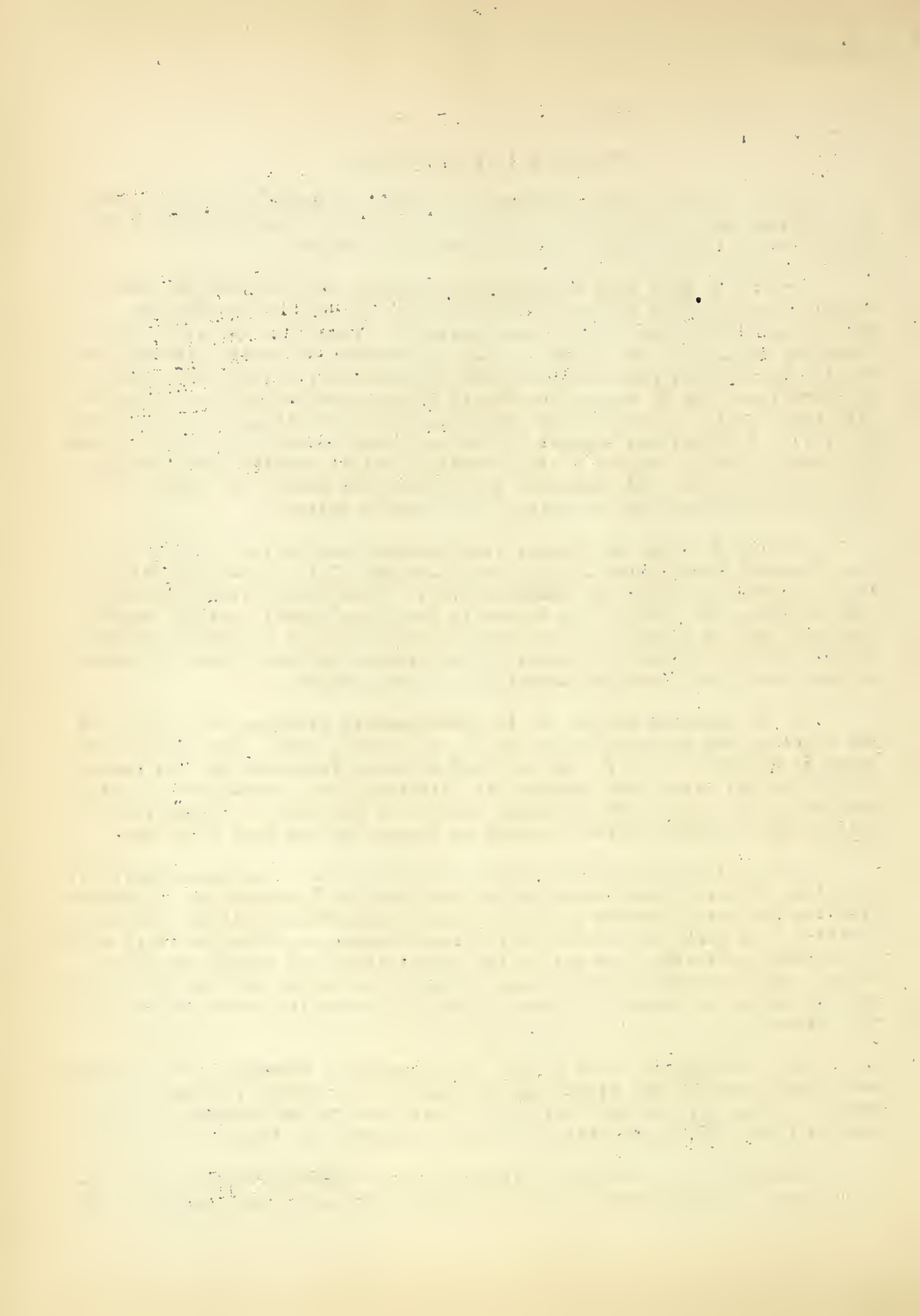
Doctor Bell and Mr. Jewett also attended the meeting of the Oregon Wool Growers' Association at Pendleton, January 27 to 29, Doctor Bell giving an address on predatory animal control. This Association also favorably endorsed the work of the Bureau in predatory animal control, urging adequate support by the State of both predatory animal and rodent operations. Doctor Bell held a series of conferences at Boise, Idaho, relative to the rodent and predatory animal work in that State.

F. G. Ashbrook and Dr. H. L. VanVolkenberg attended the meeting of the American Fox Breeders' Association, at Boston, Mass., January 17. En-route to Keeseville, N. Y., Doctor VanVolkenberg inspected the fox ranch of the Vermont Silver Fox Company, at Chittenden, Vt., relative to a disease among the foxes. Mr. Ashbrook stopped at New York to attend the fur sale of the New York Auction Company on January 22 and days following.

James Silver and Carlisle Carr have completed a successful anti-rat campaign, covering practically the entire State of Virginia, in cooperation with the Extension Service of the Virginia Agricultural College. About 80 counties took part, the county agricultural agents assisting actively in the preliminary publicity work and in the organization and conduct of the campaign. Approximately 52,000 pounds of barium carbonate was used for poisoning, an amount sufficient to cause a very high mortality among the rats of that State.

At the request of the Chamber of Commerce of Raleigh, N. C., arrangements were made for Mr. Silver and Mr. Carr to cooperate with the Extension Service of the Agricultural College of that State in an extended campaign against rats. This work will be carried on during the month of February.

Messrs. Poole, Carlough, Gilchrist, and Musgrave attended the meeting of the American National Live Stock Association, at Los Angeles, Calif.,



from January 30 to February 1.

Reports received from the field indicate that the poisoning operations against coyotes this year will be the most extensive and effective in the history of the predatory animal operations conducted by the Bureau. Stockmen throughout the West are making a favorable response and express the conviction that extension of field operations along this line will result in bringing the coyote under control within a reasonable period of time. Cases of rabies among coyotes continue to occur in Washington, Oregon, northern California, and Nevada.

J. S. Ligon, who has been engaged in studying the abundance and depredations of wolves in Alaska during the past few weeks and in demonstrating trapping and poisoning procedure, has returned to the States, and after a brief period spent at Portland and Denver will resume his work in Michigan. Interesting results were obtained by him and many specimens of birds and animals which he secured have been received in the office, making valuable additions to the scientific collection.

#### FOOD HABITS RESEARCH

H. L. Viereck has returned to Washington from his South American trip, during which he visited at Santa Marta, Colombia, and spent some time collecting natural history material in that vicinity. En route home he called at the Experiment Station in Santiago de las Vegas, Cuba, and also spent several days at Larkins, Fla.

#### GAME AND BIRD RESERVATIONS

Smith Riley, in Charge of Game and Bird Reservations, left Washington on February 1 to inspect a number of the reservations. While in the West he attended the Forest Supervisors' meeting at Denver, February 5 to 10, inclusive. He will also attend the Forest Service grazing meeting at Ogden, Utah, March 10.

Two deaths occurred in the elk herds during the past month - a very old cow at the Wind Cave Preserve and a calf at Niobrara Reservation.

Hundreds of grouse are reported to be feeding on the Sullys Hill Game Preserve.

About 21 inches of snow fell in 43 hours, beginning on the night of January 22, at the Elk Refuge, in Jackson Hole, Wyo., and the feeding of hay to the elk began on January 23. Approximately 3,000 elk are being fed on the Germain tract and 1,300 at headquarters.





## MIGRATORY BIRD TREATY AND LACEY ACTS

Mr. Lawyer returned to Washington January 24 after a trip covering about two weeks in Louisiana and Texas in connection with the administration of the Migratory Bird Treaty Act and Regulations. While in New Orleans he directed an investigation of alleged sales of migratory waterfowl contrary to the Federal Regulations. Several Federal game wardens, in conjunction with a number of deputies of the Louisiana Conservation Commission, were successful in securing evidence against 16 persons, chiefly proprietors of restaurants, indicating violations of the Federal law.

During the latter part of January Mr. Lawyer was requested to appear before a joint session of committees from both branches of the North Carolina Legislature having under consideration a bill providing for the creation of a State game department, under which would be administered State-wide fish and game laws.

As evidence of the increased seriousness with which violations of the Migratory Bird Treaty Act and Regulations are being regarded by Federal courts, it is pointed out that during January reports reached the Bureau indicating fines of \$100 each assessed in 10 cases; in 2 of these the defendants were required to pay court costs in addition. Nine of the 10 fines were imposed in January, the other in December. Two of the \$100 fines were assessed in Illinois, 5 in Louisiana, 2 in Mississippi, and 1 in Wisconsin. The offenses involved the possession of wild ducks in close season, sale of wild ducks, and killing wood ducks, woodcock, and wild ducks during the close season. Eighty-three cases, involving many kinds of violations of the Migratory Bird Treaty Act and Regulations, were transmitted to the Solicitor during the month with recommendation for prosecution.

The Bureau learned with regret of the death on January 18 of State Deputy Warden C. E. Zirbes, of Aberdeen, S. Dak. Mr. Zirbes served as a cooperative warden under the Migratory Bird Law from 1914 to 1918 and rendered the Bureau valuable assistance. Though not since then officially associated with the Bureau, he nevertheless cooperated most effectively with Warden Kelsey in the enforcement of the Federal game laws in South Dakota.

The two Italian murderers of Edgar A. Lindgren, United States Game Warden, in charge of the Iowa district, have been sentenced to life imprisonment and are now confined in the Fort Madison, Iowa, penitentiary, according to information just received from the county attorney at Council Bluffs. An unarmed nephew of the two Italians, who were brothers, was with them at the time of the shooting and, while he took no part in it, was himself shot by one of them in their flight. He testified on behalf of the State in both trials and has been released.

Warden Lindgren was fatally wounded on August 13, 1922, while attempting to arrest the three men for hunting in violation of the Federal law. The Italians resisted and one opened fire on him and wounded him so seriously that he died four days later. Doctor Nelson has written the county attorney, expressing his gratification at the manner the trial for so flagrant a crime was handled, and at its satisfactory outcome.



The following appointments were made to the position of U. S. deputy game warden during January:

Mrs. Edythe P. Doyle, Stafford Hotel, Baltimore, Md.  
John P. Heller, 3011 Lee Ave., St. Louis, Mo.

U. S. Deputy Game Warden Herman C. Price, 1307 State St., Little Rock, Ark., tendered his resignation from that position, which was accepted effective January 15.



Migratory Bird Treaty Act Cases Terminated - Reports Received during January.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Bowers*	1	West Virginia	Killing bullbats	\$10
Charlton and Louderback**	1	Ohio	Killing bittern	\$15 and costs of \$11.55
Charlton	1	"	Killing insectivorous birds	\$15 and costs of \$27.40
"	3	"	Hunting ducks after sunset	\$15 and costs of \$12.80 each
Charlton and Stuber**	1	"	Selling ducks	\$20 and costs of \$11.60
Ehlers*	1	Indiana	Possessing night heron	\$10
Fleming*	6	"	Killing ducks in close season	\$10 each
"	3	"	Selling ducks	\$10 each
"	1	"	Killing geese in close season	\$10
Fleming* and Randall**	3	"	Killing ducks in close season	\$10 each
Fleming* and Randall**	2	"	Killing ducks in close season	\$25 each and costs
Hager**	1	Massachusetts	Killing turnstones	\$3
"	3	"	Killing knots and godwits	\$1 each
Holmes	1	Nebraska	Killing gull	\$5
"	1	"	Killing ducks in close season	\$10
Lindgren***	1	Indiana	Killing ducks in close season	\$10
"	1	Illinois	Killing thrush	\$10
Lindgren*** and Merrill	1	"	Killing insectivorous birds	\$25 and costs
"	1	"	Selling ducks	\$100 and costs
Linbaugh	1	Tennessee	Killing woodpecker	\$15.60
"	2	Indiana	Killing ducks in close season	\$10 each and costs
"	1	"	Killing ducks in close season	\$10 and costs
MacGary*	2	"	Killing gallinule	\$10 each
"	2	"	Killing grebes	\$10 each
"	2	"	Killing flickers	\$10 each
"	1	"	Killing robins and woodpeckers	\$10
MacGary* and Merrill	3	"	Killing ducks in close season	\$10 each
Merrill and Merrill*	1	Illinois	Selling ducks	\$100 and costs
Mushbach	1	Montana	Operating without Federal permit	\$2
Pacetti	15	Florida	Killing doves in close season	\$5 each
Perry	1	Mississippi	Killing doves in close season	\$10 and costs of \$2.50
"	1	"	Killing ducks in close season	\$10 and costs of \$2.50
"	1	"	Killing ducks in close season	\$100
"	1	"	Killing woodcock in close season	\$100
Pratt**	2	Massachusetts	Killing sandpipers	\$1 each
"	1	"	Killing ducks in close season	\$5





Migratory Bird Treaty Act Cases Terminated - Reports Received during January. Con't

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Shaver	1	Wisconsin	Killing wood ducks	\$100
Shultz*	1	Illinois	Killing ducks in close season	\$25 and costs
Smith	1	Maine	Killing ducks after sunset	\$50
"	1	"	Killing wood ducks	\$20
Stirling*	1	Louisiana	Possessing ducks in close sea- son	\$100
"	4	"	Killing ducks in close season	\$100 each
Steele*	1	Massachusetts	Killing turnstones	\$10
Tribou*	2	"	Killing sandpipers	\$4 each
"	1	"	Killing sandpipers	\$7
Vanselow*	1	"	Killing grebes	\$25 and costs
Vanselow*	1	"	Killing sandpipers	\$25 and costs
and Berg- quist*				
Visart	2	Arkansas	Illegally transporting ducks	\$10 each
Whitehead	1	Georgia	Selling ducks	\$5
"	1	"	Shipping ducks not properly marked	\$5
"	1	"	Killing robins	\$5
"	1	"	Killing doves in close season	\$25
"	8	"	Killing doves in close season	\$15 each
Total	100			

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Deceased

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Andersen* and Kelsey	2	Iowa	Selling ducks
Backus**	3	Massachusetts	Killing wood ducks
Barmeier	2	Missouri	Killing coot from motorboat
"	2	"	Killing grebes
"	2	Illinois	Transporting ducks out of State without nonresident license
Bloxson and Derrickson**	2	Virginia	Killing ducks from motorboat
Charlton	3	Ohio	Killing ducks after sunset
"	1	"	Killing insectivorous birds
Charlton and Louderback**	1	"	Killing bittern
Ehlers* and Bauman**	2	Indiana	Killing ducks from motorboat
Foolkes**	2	Louisiana	Selling ducks





Cases Reported to Solicitor for Prosecution. Cont'd.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Fox*	1	Georgia	Killing flicker
Farrell* and Whitehead	5	Florida	Hunting ducks before sunrise
"	1	"	Hunting ducks after sunset
Hilliard	3	New Jersey	Hunting ducks after sunset
Hoffman	1	Mississippi	Selling ducks
Hoffman and Oberhaus*	4	Alabama	Hunting coot from motorboat
Holmes	1	Missouri	Killing ducks from motorboat
"	2	Kansas	Killing ducks from motorboat
Kelsey	1	South Dakota	Offering to sell ducks
Kenney*	1	Illinois	Selling ducks
Lewton*	1	Minnesota	Offering to sell ducks
Marmouget**	1	Louisiana	Selling ducks
"	1	"	Possessing ducks in close season
Naylor**	1	Massachusetts	Killing grebe
Pacetti	1	Florida	Offering to sell ducks
"	6	"	Killing doves in close season
Perry	2	Arkansas	Hunting ducks from airplane
Ransom	1	Idaho	Killing great blue heron
Shaver and Johnson**	1	Minnesota	Selling ducks
Shaver	1	"	Hunting ducks after sunset
"	1	"	Hunting ducks after sunset, before sunrise and shooting at grebes
Shaver, Worden** Totten** and Johnson**	1	Wisconsin	Selling ducks
Shupee	1	Texas	Killing robins
"	1	"	Killing bittern
Smith, Birsch, and Farnham	1	South Carolina	Shipping more than weekly limit of ducks
Steele and Brown**	1	Oregon	Killing wood duck
Steele and Marco**	4	Washington	Hunting ducks after sunset
Tonkin and Dean*	1	Idaho	Hunting ducks after sunset
Visart	1	Arkansas	Killing ducks excess of bag limit
"	2	"	Selling ducks
"	2	"	Illegally transporting ducks
Whitehead	1	Florida	Killing grebe
"	1	"	Possessing grebe
Wiegand** and Shaver	2	Wisconsin	Killing robins and swallows
Yanch* and Carothers**	2	Texas	Selling ducks
Total,	83		

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden



# THE SURVEY

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Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.

Vol. 4

Washington, D. C., March 12, 1923

No. 3

## GENERAL NOTES

Prof. W. B. Barrows, first assistant ornithologist of the Biological Survey, from 1886 to 1894, died at East Lansing, Mich., on February 26. He served as executive head of the work of the Bureau during the absence of the Chief, Dr. C. Hart Merriam, on the Death Valley Expedition and the Bering Sea Commission of 1891. Professor Barrows had been head of the department of zoology at the Michigan Agricultural College since 1894. A more extended notice will appear in The Official Record.

Doctor Nelson left Washington on February 18 for Jacksonville and other points in Florida and will be away from the office until about the first of April. While in the State he will visit the bird reservations on the coast and attend to other official matters.

The Agricultural Appropriation Bill for the fiscal year 1924 passed Congress and was approved by the President on February 26. It carries an appropriation of \$872,265 for the Biological Survey, as against \$870,565 appropriated for the current fiscal year.

The Reclassification Act of 1923 passed both houses of Congress on March 3, was approved by the President on March 4, and will become effective July 1, 1924. In the meantime a board consisting of one representative each from the Bureau of the Budget, the Civil Service Commission, and the Bureau of Efficiency will complete regulations for carrying the act into effect both for Washington, D. C., and for the field services.

For convenient reference, a synopsis of the projects of the Bureau is given on the last page of this issue.

In order to economize in the use of paper THE SURVEY will hereafter be mimeographed on both sides of the sheets. This issue inaugurates the new form.

Among manuscripts submitted for outside publication in March were:

- Bailey, Vernon, "The Harmless Horntoad that Shoots Blood from its Eyes," for Nature Magazine.
- Chambers, A. P., "Capturing a Couple of Killers in the Wind Cave Game Preserve," for the Bulletin of the American Game Protective Association.
- Cooke, May Thacher, "The Importance of Bird Censuses in the Study of Migration," for The Auk.
- Goldman, E. A., "Three New Kangaroo Rats of the Genus Dipodomys," for Proceedings of the Biological Society of Washington.



- Hanson, Karl B., and H. L. VanVolkenberg, "Treatment of Foxes with Carbon Tetrachloride, Using Soft Elastic Globules to Prevent Inhalation-Collapse," for the Black Fox Magazine and the American Fox and Fur Farmer.
- McAtee, W. L., and J. R. Malloch, "Further Notes on Names of Emsinae and Other Rhynchota," for Proceedings of the Biological Society of Washington.
- Malloch, J. R., "Diptera from Lower California," for Proceedings of the California Academy of Science.
- Nelson, E. W., and E. A. Goldman, "A New Pocket Mouse from Lower California," for Proceedings of the Biological Society of Washington.
- Oberholser, Harry C., "December and January Birds at Washington, D. C.," and "The Migration of North American Birds, XXI," for Bird Lore.
- Wetmore, Alexander, and James L. Peters, "New Genera and Subspecies Based on Argentine Birds," for Proceedings of the Biological Society of Washington.

Theo. R. Wheeler, employed as messenger in the Bureau since November, 1919, resigned on March 5 and is leaving for Detroit, Mich., to enter other employment.

#### BIOLOGICAL INVESTIGATIONS

E. A. Goldman left Washington on March 5 for Ogden, Utah, where he will attend the Forest Service Grazing Meeting, on March 10, in the interest of game problems. He expects to stop en route at Hutchinson, Kans., and Denver, Colo., for conferences regarding game matters. From Ogden he will go to the Grand Canyon Game Preserve on the Kaibab National Forest to investigate forage conditions there, in cooperation with the National Park Service, with special reference to certain areas where deer concentrate at this season. At the conclusion of this work he will visit the Wichita National Forest and Game Preserve in Oklahoma to continue investigations of the game conditions in that area, in cooperation with the Forest Service.

Plans for a cooperative expedition to the Hawaiian Islands National Bird Reservation have been perfected and Dr. Alexander Wetmore, who will be in charge, left Washington, March 10, for San Francisco and Honolulu. He will be joined at San Francisco by Charles E. Reno, an assistant in Economic Investigations, now stationed at Phoenix, Ariz. They are to proceed to Honolulu by steamship, and are due to arrive there about March 27. Donald H. Dickey, of Pasadena, Calif., will join the expedition at Honolulu, for the purpose of making motion pictures of the more interesting forms of bird and mammal life. Copies of the photographs taken by him will form a part of the official records of the expedition. Several officials from the Bishop Museum at Honolulu, representing various branches of science, will form a part of the personnel, which will make as thorough an examination as practicable of the islands. Through the courtesy of the Navy Department, the services of a 1,000-ton mine sweeper will be available to take the party to the various islands constituting the Reservation.

An important feature of the project involves the extermination of the rabbits on Laysan Island. These animals are of composite origin, being descended from at least three different forms that were turned loose about 20 years ago by the German manager of a guano company; they have interbred and increased to such numbers that they are likely to destroy all the vegetation on the island, and thus endanger the continued existence of several species of land birds. Visits to the smaller islands of the Hawaiian Archipelago are likely to result in the collection of many species of birds that are exceedingly rare in collections, and in the acquisition of a great deal of other valuable scientific data.

Harry Malleis, who was appointed field assistant on January 31, left Washington on March 10 for New Orleans, whence he is to sail for Belize, British Honduras, to conduct an expedition to the Lake Peten District of Guatemala. The main object of the trip is to secure living specimens of the ocellated turkey and the curassow for stocking Sapelo Island, South Carolina. It is planned to make the experiment of propagating these beautiful and interesting semitropical game birds under conditions which it is believed will be favorable. In addition to this work, Mr. Malleis has instructions to make general collections in natural history, especially of birds, mammals, reptiles, and batrachians. If practicable, a visit will be made to Turneffe Island, off the coast of British Honduras, the natural history of which is little known.

Dr. W. P. Taylor has been studying the winter birds of the Santa Rita Mountains, near Tucson, Ariz., at intervals through January and February, and reports several novelties for the winter bird list for that locality.

#### ALASKA INVESTIGATIONS

Fur Warden W. G. Culver, of Juneau, has reached Anchorage on his inspection trip on the Kenai Peninsula.

Benjamin Bullard, of Juneau, and James York, of Sumdum, have been appointed cooperating deputy fur wardens.

The official title of Kenneth C. Talmage has been changed from Engineer and Pilot to Master of the Bureau's sea-going power boat Sea Otter, stationed at Juneau.

Some important legislation pertaining to fur-farming matters will probably be enacted at the session of the legislature of the Territory which convened on March 4. Delegate Sutherland advises that he will be in Alaska during the session.

Lawrence J. Palmer, Assistant in Charge of Reindeer Grazing Investigations, reports that there are now seven reindeer, two bucks, two does, and three fawns, at the experimental station at Nome, on which experiments in feeding, breaking, branding, etc., will be conducted. The feed used at present consists of corn, chopped feed, alfalfa hay, linseed meal, timothy hay (native), and lichens.



New regulations for the protection of game in certain localities in Alaska have been approved by the Secretary, effective April 1. The only important change made was that of eliminating certain islands in Southeastern Alaska on which the killing of deer was prohibited in the past. Kruzof Island, however, is still retained as a deer preserve. The killing of mountain sheep and mountain goats in the eastern part of the Kenai Peninsula is prohibited until April 1, 1925. There still remains a close season on deer west of Longitude 141°.

#### ECONOMIC INVESTIGATIONS

A number of excellent specimens of wolf skins taken by J. S. Ligon in Alaska have been received. Several will be added to the Bureau collection. Mr. Ligon has returned to Lansing, Mich., and has resumed charge of the predatory animal operations in that State.

Dr. W. B. Bell addressed the meeting of the Agricultural Editors Association, February 28, on the subject of "Conservation and Control of Wild Life." This meeting was held at the Department with the view of familiarizing the editors in attendance with the chief activities of the Department.

James Silver and Carlyle Carr spent a portion of February organizing an anti-rat campaign in North Carolina. The work was limited to the ten counties showing the most active interest in the undertaking, and was undertaken to demonstrate in that State the most effective procedure in rat-control work.

Frank G. Ashbrook visited the New York branch house of a prominent London furrier on February 8 to examine a consignment of blue fox pelts recently received from Alaska. These had been produced on islands leased by the Government to ranchers for fox-farming purposes. Mr. Ashbrook reports a number of excellent skins in the shipment and a decline in prices of fox skins at the winter fur-sales of from 20 to 25 per cent.

M. E. Musgrave, predatory animal inspector in the Arizona district, reports that Hunter Charles Miller killed twelve mountain lions during the month of January, in a period of four days. This establishes the high record of the Bureau in a period of one month in mountain lion work. The kill made last year by Hunter C. E. Beebe, of Montana, of five mountain lions between 1 and 4 p.m., on February 8, 1922, is the nearest approach to this record. Mr. Musgrave also reports a kill with poison of 65 coyotes by W. E. Morgan, a new man on the job, following a brief period of coaching.

Assistant Inspector O. L. Coleman, of the Texas district, reports that poisoning operations on the Canadian River project have already covered 2,202 square miles, resulting in a kill estimated by those financing the project at from 75 to 90 per cent of the coyotes on this area, and that a border strip 5 miles wide surrounding the above territory and including approximately 1,200 square miles was poisoned, resulting in a

kill estimated at 25 per cent of the coyotes. He states that stockmen make an effort to secure the scalps of dead animals up to the point where they are convinced of the effectiveness of the method. After this point has been reached they do not wish to spend time hunting dead animals but devote their entire energy in covering as much territory as possible with poison baits. This interesting development of poisoning operations in Texas is in line with the attitude shown by stockmen in several other districts.

#### GAME AND BIRD RESERVATIONS

One of the latest reports from the Elk Refuge stated that about nine tons of hay were being fed to the elk each day and four sleighs were being used in the feeding.

According to pioneers in the vicinity of Sullys Hill Game Preserve, N. Dak., the severest storm since the winter of 1902 occurred during February 13-16. The temperature was 10 degrees below zero and a 40-mile wind was blowing. On February 3 the thermometer registered 34 below zero at this preserve.

J. J. Furber, who has served as warden of the Klamath Lake Reservation, Oreg., since May, 1912, and who has also had supervision of the Clear Lake Reservation, Calif., resigned effective at the termination of February 28. Mr. Furber is moving to California at some distance from the reservations and therefore felt that he would be unable to continue his duties.

A mule deer, a pet at the Bison Range, has been named "Nancy" by the warden. She raised two fawns in the inclosure fenced off from the main range. Five other mule deer, including a large buck, are also very tame and these deer come frequently to the feed yard. "Nancy" is the leader of the bunch and will follow like a dog anyone who will feed her bran or oats.

The death has been reported of a buffalo bull at the Bison Range on February 25. This was one of the largest in the herd, in good flesh and the hide in prime condition, and was one of the animals obtained from the Conrad estate at the time the Bison Range was established. He was received at the preserve in October, 1909, at which time he was four years old. The cause of his death could not be discovered; he had apparently dropped to the ground and died without a struggle. The death of a young bull elk at the Bison Range has also been reported. This animal had evidently been gored by another bull.

#### IMPORTATIONS

The importation of quail from Mexico began about the middle of February and under present regulations will continue until April 30.

The total number of birds imported at various ports during February



amounted to about 22,000. Under the tariff act, each bird valued at less than \$5 is subject to a duty of 50 cents, indicating that the amount paid into the Treasury for importation of birds during the month was about \$11,000.

On February 15, eight elephants arrived at the port of New York. This shipment is interesting as it is the first of several consignments expected this year. The number of elephants now in the United States is said to be larger than ever before.

A shipment of birds and mammals arriving at New York on February 8 contained a miscellaneous assortment of species and through inadvertence the notification to the inspector referred to certain "barbets" as mammals. This immediately drew forth an inquiry as to when barbets became mammals. The reply called attention to the fact that the term "barbet" as applied to birds is only a secondary meaning, and that according to the primary definition given in standard dictionaries the name belongs to mammals, viz., a peculiar variety of dog.

On February 23, the serial numbers on permits for the importation of foreign birds and mammals reached five figures. This indicates that since May 25, 1900, when the regulation of the entry of foreign birds was first entrusted to this Department, permits have been issued for 10,000 separate consignments. In recent years the average number of permits has been about 500. The total number of birds covered by permits issued since 1900 aggregates several millions.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

During the early part of February Mr. Lawyer visited Florida in connection with the administration of the migratory-bird treaty act and regulations. While there he conferred with Warden Pacetti and made certain investigations regarding alleged depredations by robins in strawberry fields. While in Tampa Mr. Lawyer conferred with officers and members of the Florida State Sportsmen's Association and others interested in a proposed State-wide game and fish law. He found a hearty and enthusiastic sentiment favoring the enactment of such a measure and the creation of a State game and fish commission.

Mr. Lawyer went to Norfolk on February 28, where he on the next day conferred with U. S. Game Wardens Birsch and Bloxson and made an examination of work recently performed on one of the Bureau boats.

Talbott Denmead, Deputy Chief, visited Little Rock, Ark., early in February in connection with migratory-bird treaty act administrative work. While there he conferred with Judge Lee Miles, a member of the State Game Commission and also a member of the Advisory Board, Migratory Bird Treaty Act, and with Warden Visart. En route to Little Rock he interviewed Warden Barmeier, at St. Louis, Mo.

Warden Barmeier and Deputy Warden Heller are to be congratulated

on their good work in apprehending 9 violators near Caruthersville, Mo., on February 25. All of the violators were caught hunting and ducks were seized from them.

O. J. Trenis resigned from the position of U. S. game warden, effective February 18.

The following appointments were made to the position of U. S. deputy game warden during February:

James E. Harrison, 825 Second Ave., Gallipolis, Ohio.  
 Frank Dufresne, Nome, Alaska (Fur Warden and U. S. Deputy Game Warden).  
 John T. Graney, 3705 Trowbridge St., El Paso, Tex.  
 Fred H. Wilke, Hurley, Wis.  
 Garnett W. Saye, 316 Flint St., Albany, Ga.  
 Walter G. Culver, Juneau, Alaska (Fur Warden and U. S. Deputy Game Warden).  
 Kenneth C. Talmage, Juneau, Alaska (Master U. S. Powerboat "Sea Otter," Fur Warden, and U. S. Deputy Game Warden).  
 Otis J. Trenis, 3059 "Q" St., N. W., Washington, D. C.

Appointments of the following U. S. deputy game wardens were terminated during February:

Otto G. Gewinner, 2620 N. 19th Ave., Omaha, Nebr.  
 Elmer Heintzelman, 912 Second St., Norfolk, Nebr.  
 Earl G. Kendal, Lincoln, Nebr.  
 Vurn Welch, R. D. No. 1, Oak Harbor, Ohio.  
 Lewis F. Eckhart, Clarks Hill, Mt. Washington, Md.  
 Geo. W. Lindemuth, 525 Wildwood Ave., Fort Wayne, Ind.  
 Geo. P. Wellington, East Jaffery, N. H.  
 Gotleib W. Trunk, R. D. No. 2, Chillicothe, Ill.  
 Edward L. Wells, Antler, N. Dak.  
 James J. Flanagan, Towner, N. Dak.  
 William Bauer, Thunder Hawk, S. Dak.  
 John Egan, 1406 Clark St., Manitowoc, Wis.  
 Edward D. Ricketts, Live Oak, Calif.  
 Henry E. Willets, Smithville, N. J.  
 Geo. R. Duncan, Box 109, Missoula, Mont.  
 Wallace Libbey, Box 324, Maxwell, N. Mex.  
 Harry T. Johnson, 111 North Fourth St., Albuquerque, N. Mex.

#### Cases Reported to Solicitor for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	1	Illinois	Hunting ducks after sunset
Brown*	1	Alabama	Killing flickers
Capps*	2	Virginia	Killing coots from motorboat

## Cases Reported to Solicitor for Prosecution. (Continued)

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Farnham	1	Pennsylvania	Killing woodpeckers
Heller*	2	Missouri	Killing ducks after sunset
Hilliard	1	New Jersey	Hunting ducks after sunset
Ingouf*	2	Louisiana	Killing ducks at night
MacKenzie*	4	Wisconsin	Hunting ducks from motorboat
Mecarta*	2	Massachusetts	Killing sandpipers
Merrill and Soderlund*	2	Illinois	Killing grebes
Mushbach and Kennedy**	3	Montana	Hunting ducks after sunset
Oliphant*	1	Virginia	Killing sandpipers
Pacetti	1	Florida	Killing robins
Pierce*	2	New Jersey	Hunting ducks after sunset
Riddick*	4	Arkansas	Hunting ducks after sunset
Sellers*	1	Louisiana	Possessing ducks in close season
Shaver and Hoenberg**	1	Wisconsin	Hunting ducks after sunset
Shaver and Nordin*	2	Minnesota	Hunting ducks after sunset
Steele	3	Washington	Hunting ducks after sunset
Tonkin	3	Oregon	Hunting ducks after sunset
"	2	Idaho	Hunting ducks after sunset
Visart	1	Arkansas	Illegally transporting ducks
"	1	"	Hunting ducks after sunset
Whitehead	3	Georgia	Killing wood ducks

\* U. S. Deputy Game Warden.

\*\* Deputy State Game Warden.

## Migratory Bird Treaty Act Cases Terminated - Reports Received during February.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Pacetti	1	Florida	Killing robins	\$1
Smith	1	Maine	Killing sandpipers	\$10
"	1	"	Killing wood ducks	\$10
"	1	"	Killing ducks in close season	\$50
Visart	1	Arkansas	Illegally transporting ducks	\$10 and costs
"	2	"	Killing ducks in excess of daily bag limit	\$10 each and costs



BUREAU OF BIOLOGICAL SURVEY  
- LIST OF PROJECTS -  
FISCAL YEAR -- 1923

## ADMINISTRATION

1. General Administration
2. Operation

## GAME AND BIRD RESERVATIONS

3. Supervision
4. Bird Refuges
5. Montana National Bison Range
6. Wind Cave National Game Preserve
7. Elk Refuge
8. Sullys Hill National Game Preserve
9. Niobrara Reservation
- 9R. Restocking Reservations

## ECONOMIC INVESTIGATIONS

10. Supervision
11. Food Habits of Injurious Animals
12. Eradication Methods
13. Destruction Injurious Rodents
14. Destruction Predatory Animals
15. Production Fur-bearing Animals

## FOOD HABITS RESEARCH

16. Relation of Native and Introduced Birds to Agriculture
17. Relation of Reptiles and Amphibians to Agriculture

## BIOLOGICAL INVESTIGATIONS

18. Supervision
19. Investigation of Wild Animal Life
20. Biological Surveys of States and Territories
21. -----
22. Life Habits of Injurious Animals

ENFORCEMENT OF MIGRATORY-BIRD TREATY  
AND LACEY ACTS

23. Supervision
24. Protection Migratory Birds
25. Biological Investigations of Migratory Birds
26. Economic Investigations of Migratory Birds
27. Interstate Commerce in Game
28. Importation of Foreign Birds and Mammals
29. Inspection and Quarantine of Quail
30. Publication of Information Concerning Game Laws

## INVESTIGATIONS IN ALASKA

31. Reindeer Industry in Alaska
32. Protection of Land Fur-bearing Animals in Alaska

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RECEIPTS

PAID

Jan 1. Balance forward 100.00  
Feb 1. Cash 50.00  
Mar 1. Cash 25.00  
Apr 1. Cash 10.00  
May 1. Cash 5.00  
Jun 1. Cash 2.50  
Jul 1. Cash 1.25  
Aug 1. Cash .62  
Sep 1. Cash .31  
Oct 1. Cash .15  
Nov 1. Cash .08  
Dec 1. Cash .04  
Total 232.75

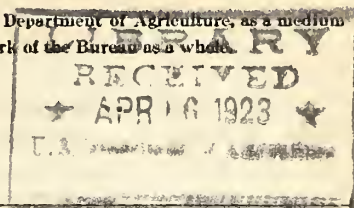
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# THE SURVEY

Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.



Vol. 4.

Washington, D. C., April 11, 1923

No. 4

Doctor Nelson, who has been in Florida during the past month, completed on March 30 at Okechobee City a boat trip of nearly 800 miles, which resulted in his securing a vast fund of first-hand information concerning the bird life of the region.

The following publications of the Bureau were received in March:

Department Circular No. 260, "Annual Report of the Governor of Alaska on the Alaska Game Law, 1922," March 1.

Farmers' Bulletin 1239 (Rev.), "Community Bird Refuges," issued "January, 1923," received March 24.

Service and Regulatory Announcement No. 53, "Regulations for the Protection of Game in Certain Localities in Alaska," March 26.

Among manuscripts submitted for outside publication in March were:

Bailey, Vernon, "Mammals of the District of Columbia," for the Proceedings of the Biological Society of Washington.

-----"Maximilian's Travels in the Interior of North America," for Natural History.

Gabrielson, Ira N., "A Few Notes on Some Oregon Species of Shorebirds," for The Condor.

-----"A Winter Record of the Spotted Sandpiper (*Actitis macularia*) for the Olympic Peninsula," for The Condor.

-----"Notes on the Birds of Western North Dakota," for The Auk.

Goldman, E. A., "Panama," for Naturalists' Guide to the Americas.

McAtee, W. L., "Another Insect Birds Should Not Eat," for The Auk.

-----"Sugar-cane Beetles in Queensland," for The Auk.

-----"Success in Prairie Tree Planting," for The Auk.

Malloch, J. R., and W. L. McAtee, "Keys to Flies of the Families Lonchaeidae, Pallopteridae, and Sapromyzidae of the Eastern United States, with a List of the Species of the District of Columbia Region," for the Proceedings of the U. S. National Museum.

Nelson, E. W., "The Economic Importance of Wild Life," for The Scientific Monthly.

Oberholser, Harry C., "The Value of Rice Lake, Iowa, as a Breeding Ground for Waterfowl," for the Ames Forester.

Scheffer, Theodore H., "Taking Beavers Alive and Uninjured," for some conservation journal.

Taylor, Walter P., "The Basic Importance of Life History Studies," for the Journal of Mammalogy.



- "Mammalian Mountaineers," for Nature.  
Taylor, Walter P., and Charles T. Vorhies, "Kangaroo Rats and Scorpion Mice on the Santa Rita Reserve, Arizona," for the Journal of Mammalogy.  
Wetmore, Alexander, "The Wood Rat in Maryland," for the Journal of Mammalogy.  
-----"List of Sea Birds Collected by Mr. Charles Fagan," for the Condor.  
-----"New Subspecies of Birds from Patagonia," for the University of California Publications in Zoology.  
-----"An Additional Record for the Extinct Porto Rican Quail Dove," for The Auk.  
-----"Avian Fossils from the Miocene and Pliocene of Nebraska," for the Bulletin of the American Museum of Natural History.

Roland E. Nairn, of the Accounting Office, was transferred to the Bureau of Public Roads to fill a vacancy in a similar position in that bureau, effective March 22. Mr. Nairn was with the Biological Survey for nearly four years and has been connected with the Department since June, 1914.

Elmer W. Erickson, stenographer in the Administrative Office since February 24, 1922, was transferred April 1 to the Office of the Solicitor.

#### BIOLOGICAL INVESTIGATIONS

E. A. Goldman, who is making an examination of several areas in the region about the Grand Canyon, Arizona, reports large numbers of deer wintering in the country bordering the canyon on the west, about 500 having been seen in one day. Large numbers of the young of last year are seen and there is no evidence of starvation impending.

Arthur H. Howell left Washington on March 11 for central Florida to conduct an investigation of the breeding birds of that region. Herbert E. Brandt, an ornithologist especially interested in the bird life of Florida, is collaborating with him in these studies. Headquarters were established at Sebring, from which point trips are made to the places which need to be worked. These include the Kissimmee Prairie region--Fort Bassenger, Fort Kissimmee, and Istokpoga Lake being especially noteworthy localities. Collections made to date include a number of rare and interesting specimens, and the notes include many very valuable ones. Mr. Howell was joined for a few days early in April by Doctor Nelson.

Dr. Alexander Wetmore, in charge of the Hawaiian expedition, sailed from San Francisco on March 21 for Honolulu, in accordance with plans announced in last month's issue. He reported that all necessary supplies had been secured and the outlook was very favorable for a successful trip. The latest news from him by wireless, dated Honolulu, April 4, announced that the party, including eleven scientists, was expected to sail at noon of that day for Laysan.

Dr. Walter P. Taylor was engaged during March mainly in the preparation of his report on the birds and mammals of Washington, and in inaugurating his work on the life habits of jack rabbits. On March 3 he delivered an illustrated lecture on the birds and mammals of Mount Rainier National Park, at the University of Arizona, on the occasion of the organization meeting of the Tucson National History Society.

Work accomplished by T. H. Scheffer during March at Puyallup and in the adjacent region, included investigations of pocket gophers and the capture of varying hares designed to stock certain islands in southeastern Alaska.

#### ALASKA INVESTIGATIONS

Dmitry A. Hotvoitsky, a Russian missionary stationed for many years at Belkofsky, has been appointed a cooperating deputy fur warden.

L. J. Palmer, assistant in charge of reindeer investigations at Nome, has sent in a map showing the number and location of reindeer herds in different regions of western Alaska.

The latest telegraphic report received from Fur Warden Frank Dufresne, who is making investigations in the Kuskokwim country, was from Flat, on March 23. He reports finding game and fur conditions fairly satisfactory.

Inquiries regarding available islands for the propagation of foxes are increasing rapidly. Andrew Grosvold, of Sand Point, one of the leading fox farmers in the Territory, has applied for a lease for Simeonof Island, one of the principal islands of the Shumagin Group.

Olaus J. Murie, assistant biologist, stationed at Fairbanks, will soon proceed to the Mount McKinley National Park region to arrange again for the capture of a number of young caribou bulls to be used for experimental purposes with reindeer. The corral was completed last fall.

The Bureau of Fisheries has announced that a limited number of blue foxes from the Pribilof Islands will be sold for breeding purposes the coming season. The same arrangements for handling the animals as last year will be made, through cooperation with Reservation and Fur Warden, Donald H. Stevenson, stationed at Unalaska. The price will be \$175 for each animal.

#### ECONOMIC INVESTIGATIONS

F. G. Ashbrook visited the experimental fur farm at Keeseville during the last week of March to inspect the work being carried on there. On his return trip he stopped in New York to obtain information as to the trend of the fur market, and in Wilmington to confer with officials regarding the muskrat industry in that State.



Earlier in the month Mr. Ashbrook, accompanied by Talbott Denmead, Deputy Chief U. S. Game Warden, visited the marshes of the Eastern Shore of Maryland, to make observations on the muskrat industry there. Dorchester and adjacent Maryland counties probably produce more muskrats to the acre than any other known area of the United States, and the increasing value of this kind of fur is making many otherwise useless marsh lands of greater commercial value than similar-sized areas under cultivation. Various acreages of marsh land yield an income of \$8, \$10, or \$12 per acre. It is not unusual to capture 2,000 or more muskrats on tracts comprising 300 acres. Marsh owners this season received from \$1.50 to \$1.90 per muskrat skin.

Arrangements have been completed between the Biological Survey and the Bureau of Fisheries, U. S. Department of Commerce, for Dr. H. L. VanVolkenberg, who has been employed on the experimental fur farm at Keeseville, N. Y., to take up work with the Bureau of Fisheries on the Pribilof Islands. This work is undertaken primarily for the purpose of increasing the production of blue foxes and improving the quality of pelts produced by these animals. Investigations contemplated will include a study of the physical conditions affecting foxes on the islands and also diseases to which the animals are subject. Doctor VanVolkenberg's thorough training in animal husbandry and veterinary medicine, coupled with his experience in the study, handling, and care of fur bearers at the experimental fur farm, fits him admirably for this important assignment.

Kenneth P. Pickrell, who was temporarily in charge of predatory animal work in Michigan during the absence of J. Stokley Ligon, has returned to Arizona to resume work as assistant to M. E. Musgrave.

The following field appointments were made during the month: Paul Zuick, Reuben Hansen, and E. B. Perkins, field assistants, in Idaho; A. H. Swain, field aid in biology, in Washington; G. C. Oderkirk, field aid in Biology, in North Dakota; and Roy Moore, field aid in biology, in Montana.

C. E. Reno, who has been serving as assistant to D. A. Gilchrist in the rodent control work in Arizona, discontinued this work on March 14 in order to join Dr. Alexander Wetmore in work in the Hawaiian Islands. Mr. Reno was assigned to this expedition primarily to assist in destroying rabbits on Laysan Island where these animals are endangering the food supply of important species of birds which occur there.

Much interest attaches to the extended field operations against prairie dogs, now in progress in the Pan-handle section of Texas. Following effective and energetic work of Messrs. Gray and Whitehead, stockmen are organizing eradication campaigns on a scale heretofore without precedent in that State and prospects are excellent for a strong development of this work. Weather conditions have been favorable to prairie dog field operations, which are also well under way in portions of Kansas and Arizona. Plans have been well organized to launch prairie-dog and ground-squirrel campaigns as the season for this work opens in the States to the north.

Gratifying returns have already been received from a number of States regarding appropriations for the coming biennium to be used in cooperation with the Bureau in rodent and predatory-animal control work. Arizona continued the present appropriation of \$30,000 for predatory animal work and \$30,000 for rodent control. Colorado appropriated \$20,000 for cooperation in predatory animal work through the Livestock Inspection Commission. New Mexico continued the appropriation of \$50,000 for rodent and predatory animal work and added \$50,000 additional for predatory animal work. Nevada appropriated \$60,000 for predatory animal and rodent work. Wyoming continued the appropriation of \$30,000 for predatory animal work. Oregon increased the appropriation for predatory animal work from \$7,000 to \$40,000 and provided that additional funds might be appropriated by counties. Washington increased the regular appropriation from \$17,000 to \$25,000 and made provision for the use of funds derived from a special tax on dogs, which will probably result in more than \$50,000 being made available from this source. In Montana, provision was made for predatory animal work to be conducted by the State Fish and Game Commission and also by the State Livestock Commission; it is estimated that from \$90,000 to \$100,000 will become available from these two sources. South Dakota also made a splendid start by appropriating \$30,000 through the State Game and Fish Commission for predatory animal work. In Utah, legislation providing that 50 per cent of the funds derived from special taxes on live stock shall be expended in cooperation with the Bureau in predatory animal work continues in effect. Laws were passed in a number of other States making conditions more favorable for the effective conduct of these two forms of control work, and appropriation bills are still pending in various others.

#### FOOD HABITS RESEARCH

E. R. Kalmbach attended a public hearing at Concord, N. H., on March 8, to present data regarding the food habits of the ruffed grouse. This hearing was called by the Commissioners of Game and Agriculture of the State to discuss the subject of damage inflicted by ruffed grouse on apple trees through their budding operations. Reports indicate that the birds have increased considerably throughout New England within the last few years, and accounts of damage have been frequent. In addition to complaints against grouse in New Hampshire, others have been made in Massachusetts, Rhode Island, Maine, and Connecticut.

#### GAME AND BIRD RESERVATIONS

The first calf reported in the buffalo herds this season was born at Niobrara Reservation, Nebr., on March 18 - a female - and is said to be strong and active.

The following deaths in the herds at the game preserves have been reported: Sullys Hill Preserve, three elk - a cow and two calves, one of the calves having perished in the severe storm in February; Montana Bison Range, a buffalo cow, about 20 years old - one of the original herd obtained from the Conrad estate; Wind Cave Preserve, a buffalo cow, about 11 years old, and three antelope, the latter killed by coyotes.



As the coyotes have again begun to prey on the band of antelope at Wind Cave Preserve, John N. Martin, expert hunter and trapper of the Division of Economic Investigations, has been sent from the State Park at Fairburn, S. Dak., to conduct a campaign against these predatory animals and to prevent, if possible, further losses. Warden A. P. Chambers is also doing everything in his power, and on March 27 captured the coyote believed to have killed the three antelope mentioned above.

A report from the Elk Refuge states that on the evening of March 22 at 8:25, two distinct waves of an earthquake rocked the house at the Germain place. The earthquake was general in a northerly and southerly direction through the valley, but was not felt across the Teton Mountains. It was more severe in the direction of Yellowstone Park.

Thousands of swans are resting on Lake Malheur Reservation, Oreg., and ducks, coots, and geese are plentiful.

Very cold weather, with blizzards prevailing, was reported at the Elk Refuge after the middle of March. It has been very cold also at Wind Cave, but the latest advices from that preserve report warmer weather and the snow nearly gone. Stormy and disagreeable weather generally prevailed at the Bison Range and Niobrara Reservation during March. At Sullys Hill Preserve the snow was fully three feet deep in the timber, making it extremely difficult for the elk to find forage. As these animals had begun to shed their winter coats, the cold weather was hard on them. On March 18, the thermometer registered 7 degrees above zero at Big Lake Reservation, Ark., the coldest weather reported in 52 years in that vicinity at this time of year.

#### IMPORTATIONS

The importation of Mexican quail which began in February did not continue as anticipated. Restrictions imposed by the Mexican authorities have caused a marked reduction of the number of birds entered, and several importers have ceased operations entirely. No birds have been received this year at the port of Eagle Pass and comparatively few at Laredo. Most of the birds thus far brought in have been entered at Brownsville.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer spent from March 27 to 29 in New York and Boston in connection with matters pertaining to the administration of the migratory-bird treaty act and regulations.

Talbott Denmead visited Dorchester and Somerset Counties, Md., March 9 to 13 in connection with migratory-bird treaty act investigations. He was accompanied by Frank G. Ashbrook, of the Division of Economic Investigations.

A sentence of fifteen days in jail was pronounced by Judge Soper on April 2, 1923, in the Federal court at Baltimore, Md., against Oscar Lawson, of Crisfield, on a plea of guilty to the charge of hunting wild ducks after sunset on January 7, 1922.

John E. Thompson, a fish and game dealer at Center Market, Washington, D. C., was fined \$250 in the Federal court on March 28, by Judge John P. McMahon, for possessing wild ducks and woodcock in cold storage during the close season. The fine was assessed on a plea of guilty.

Frank S. Miller, who for several years has been employed in the Solicitor's Office, was transferred effective April 1 to a vacancy in the position of U. S. game warden with headquarters in Washington, D. C. Mr. Miller's district will include parts of Virginia and Maryland.

Miss Ruth Stiles was transferred from the Bureau of Animal Industry to this Bureau, effective March 16, to fill the vacancy created by the resignation of Miss Helen Miner.

The following appointments were made to the position of U. S. deputy game warden during March:

Ferdinand J. L. Kiesel, 632 Broad St., Grinnell, Iowa.  
Harold A. Brown, Cooperstown, N. Dak.  
Burnie W. Maurek, Sanish, N. Dak.  
William O. Smith, Poughkeepsie, Ark.  
Samuel C. Smothers, Eagle Lake, Tex.  
William MacAlexander, Wichita, Kan.

Appointments of the following U. S. deputy game wardens were terminated during March:

Lloyd D. Mitchell, Box 351, Oshkosh, Wis.  
William A. Keys, Princeton, Wis.  
Siguard G. Swanson, Creston, Iowa.

## Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier and Heller*	2	Missouri	Selling and purchasing ducks
Barmeier	4	"	Selling geese
Beckwith*	1	Iowa	Killing duck in close season
Bloxsom	2	Maryland	Possessing ducks in storage during close season
"	1	"	Selling ducks
"	1	Virginia	Killing egret
Bloxsom and Trenis*	3	"	Killing ducks in close season
Birsch	1	"	Transporting more than weekly limit of ducks
Charlton and Willson*	1	Michigan	Selling ducks
Charlton, Hanes* and Richter**	1	Ohio	Possessing ducks in storage during close season
Ehlers*	1	Indiana	Killing duck in close season
Heller*	3	Missouri	Killing ducks from motorboat
Kelsey and Johnson**	1	So. Dakota	Selling ducks
Merrill and Soderlund*	1	Illinois	Attempting to kill grebe
Merrill and Scholler*	8	"	Possessing ducks in storage during close season
Mushbach	1	Montana	Possessing ducks in storage during close season
Pacetti	1	Florida	Killing doves in close season
Perry	1	Mississippi	Killing wood ducks
Ransom	1	Idaho	Killing gull
Shaver	2	Minnesota	Possessing ducks in storage during close season
Shaver and Kleist**	1	Wisconsin	Possessing ducks in storage during close season
Shaver and Bridges***	1	Minnesota	Possessing ducks in storage during close season
Shaver and Drumm***	1	"	Possessing ducks in storage during close season
Shaver and Nordin*	1	"	Selling ducks
" " "	2	"	Hunting ducks after sunset
Shaver	2	"	Killing bitterns
"	1	Wisconsin	Selling ducks
Shaver and Acker-knecht*	1	Minnesota	Possessing ducks in storage during close season
Shaver, Worden**, Boomer* and Mitchell*	2	Wisconsin	Hunting ducks after sunset
Shaver, Worden** and Mitchell*	2	"	Hunting ducks after sunset
Steele	1	Washington	Hunting ducks after sunset
Steele and Clark**	2	Oregon	Possessing ducks in storage during close season



<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Steele and Stetson**	1	Washington	Hunting ducks after sunset
Tonkin	3	Idaho	Hunting ducks after sunset
Tonkin and Dean*	6	"	Hunting ducks after sunset
Visart	1	Arkansas	Killing woodpecker
Visart and Perry	1	"	Possessing ducks in storage during close season
" " "	1	"	Hunting ducks in close season
Whitehead and Rowland**	19	Georgia	Killing doves in close season
" " "	1	"	Killing ducks in close season
" " "	1	"	Possessing ducks in close season
Whitehead	1	"	Killing doves in close season

\* U.S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Cooperator

#### Migratory Bird Treaty Act Cases Terminated - Reports Received during March

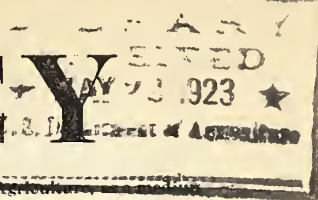
<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Denmead	1	Dist. Columbia	Possessing ducks in close season	\$50
Earnshaw*	1	"	Possessing ducks in storage during close season	\$250
Holmes	1	Kansas	Killed whooping crane	\$5
"	2	Louisiana	Selling ducks	\$25 each
Lindgren**	3	Illinois	Killing insectivorous birds	\$10 each
"	1	"	Killing meadowlarks	\$25
Merrill	1	"	Operating without Federal permit	\$1 and costs
Pacetti	1	Florida	Selling ducks	\$1 and costs
"	1	"	Killing ducks in close season	\$1 and costs
Steele	1	Washington	Hunting ducks after sunset	\$25
Vanselow*	1	Illinois	Attempting to kill ducks in close season	\$10

\* U.S. Deputy Game Warden

\*\* Deceased



# THE SURVEY



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Vol. 4.

Washington, D. C., May 17, 1923.

No. 5.

## GENERAL NOTES.

Doctor Nelson returned to Washington April 18 from his trip to Florida, where he secured valuable first-hand information regarding the bird reservations and the migratory birds in that State. Nearly all of the reservations on the Florida coast were visited.

The following members of the staff of the Biological Survey are on the program of the fifth annual stated meeting of the American Society of Mammalogists, held in the Academy of Natural Sciences of Philadelphia, May 15 to 17: Dr. Walter P. Taylor, "The Basic Importance of Life-history Studies" (presented by C. C. Adams); Dr. T. S. Palmer, "Genera of Mammals Described During the Last Twenty Years"; E. A. Goldman, "Deer of the Grand Canyon Game Preserve, Arizona"; Frank G. Ashbrook, "Trade Names in the Fur Industry"; and Vernon Bailey, "Breeding Habits and Rate of Reproduction of Meadow Mice." In addition to those on the program, the following members of the Survey have been in attendance at the meeting: Doctor Nelson, Mr. Henderson, Dr. Jackson, Mr. Barrett, Mrs. Elliott, and Mrs. Snyder.

News of the death of Mrs. Annabelle Reno, at Klondyke, Ariz., on May 7, was received with much sorrow. It will be remembered that her husband, Charles E. Reno, is a member of the Bureau's expedition which left San Francisco in April for the Hawaiian Islands Bird Reservation. Mrs. Reno had been ill only five days, with pneumonia, following an attack of influenza. The funeral took place at Willcox, Ariz., May 9. Besides her husband, Mrs. Reno leaves one child, who is being taken care of by her mother. Mr. Reno has the sincere sympathy of all members of the Biological Survey in his sad bereavement.

Elmer R. Scholl was reinstated to the position of stenographer to the Chief of Bureau, effective April 16. Mr. Scholl was previously employed with the accounting office of the Bureau, resigning in 1917 to enter the army as field clerk. He was stationed in France for about two years.

The following publications of the Bureau were received in April :

Department Circular No. 261, "The Purpose of Bird Censuses and How to Take Them," by May Thacher Cooke. Received April 9.  
Farmers' Bulletin No. 1247 (Rev.), "American Moles as Agricultural Pests and as Fur Producers," by Theo. H. Scheffer. "Issued Feb. 1923," received April 6.



Among manuscripts submitted for outside publication in April were:

- Ashbrook, Frank G., "The Importance of Amalgamation to the Silver Fox Industry," for the American Fox and Fur Farmer.
- "Muskrat Production on the Eastern Shore of Maryland," for the Fur Trade Review.
- Cooke, May Thacher, "Birds Among Man's Best Friends," for Nature Magazine.
- Day, Albert M., "Common Rodent Pests of Wyoming," for publication as a "Wyoming Farm Bulletin."
- Gabrielson, Ira N., "Four New Bird Records for Oregon," for The Condor.
- "Notes on the Birds of Wallowa County, Oregon," for The Auk.
- Jewett, Stanley G., "The Horned Puffin (Fratercula corniculata), on the Coast of Oregon," for The Condor.
- McAtee, W. L., "Ducks Useful in Arkansas as Scavengers of Red Rice," for The Auk.
- "Economic Ornithology in Recent Entomological Publications," for The Auk.
- McAtee, W. L., and J. R. Malloch, "Revision of the American Ploiariinae (Heteroptera: Reduviidae)," for Transactions of the American Entomological Society.
- Malloch, J. R., "An Amended Synopsis of the Genus Mydaea (Diptera: Anthomyiidae)," for the Canadian Entomologist.
- "A Note on the Relationships of Pyrgotidae (Diptera)," for Entomological News.
- Preble, Edward A., "Frank Blake Webster--Biographical Notice," for the Journal of Mammalogy.
- Walker, Ernest P., "Definite Breeding Record for the Aleutian Tern in South-eastern Alaska," for The Condor.

#### BIOLOGICAL INVESTIGATIONS

E. A. Goldman, who since March has been making examinations of game ranges with special reference to forage conditions in the vicinity of the Grand Canyon, Arizona, has returned to Washington. On his way back he visited the Wichita National Forest and Game Preserve, in Oklahoma, where, in cooperation with the Forest Service, consideration was given to game matters in that area. He reports that the buffalo planted on the Wichita a few years ago are thriving, and that elk, deer, and wild turkeys are increasing rapidly.

Frederick C. Lincoln addressed a special meeting of the Linnaean Society of New York on April 24. This meeting, held at the American Museum of Natural History, was called by the Society for the purpose of promoting investigations of birds by means of the banding method in the middle Atlantic States. About 150 persons were present, and a cooperative regional association will probably be formed for the purpose of coordinating the banding activities of persons interested in this work.

Dr. W. P. Taylor, in collaboration with Dr. Charles T. Vorhies, of the University of Arizona, is investigating the life histories of jack rabbits in Arizona, with special reference to range problems. Recent investigations include a study of methods used in jack-rabbit drives in Sulphur Spring Valley, Cochise County, and studies of the life history of the antelope jack rabbit on the U. S. Range Reserve, at the base of the Santa Rita Mountains, Pima County.



Dr. Taylor was recently elected president of the newly organized Tucson Natural History Society. The organization, which already has a charter membership of 60, plans to promote an intelligent appreciation of nature and to assist in conservation of wild life.

#### ALASKA INVESTIGATIONS

Fur Warden Frank Dufresne, of Nome, completed his inspection trip of the Kuskokwim region, returning to Nome, April 26. He is now arranging to make an inspection trip to the Shishmaref region in the northwest part of Seward Peninsula.

The appointment of Benjamin Bullard, of Juneau, as a special cooperating deputy fur warden has been canceled at his request, he having accepted a position the duties of which will not permit him to devote any time to the work of deputy fur warden.

Reservation and Fur Warden Donald H. Stevenson, stationed at Unalaska, Aleutian Islands Reservation, has returned to his headquarters after spending the winter at False Pass. He is spending two weeks on the Pribilof Islands studying fox breeding.

Chief Fur Warden E. P. Walker and Capt. K. C. Talmage of the Sea Otter left Juneau on May 5 for Seattle, Wash., where extensive repairs will be made to the boat, including repainting. During the month required for the work Mr. Walker will probably come to Washington for a conference regarding Alaska affairs in general.

A regulation promulgated by the Secretary, effective May 1, establishes a special open season of fifteen days--May 1 to 15--for killing beaver in the valley and tributaries of the Yukon River from the mouth of the Tanana River to Bering Sea. The new regulation applies to this year only. Conditions among the Indians in the region was the main cause for allowing beaver to be killed for this period.

#### ECONOMIC INVESTIGATIONS

J. S. Ligon visited the Washington office for a few days during the latter part of April to confer regarding conditions which he found in Alaska and results accomplished in his investigation of methods adapted for the control of wolves. His visit afforded an opportunity also to discuss the work now being carried on against predatory animals in Michigan in cooperation with the State Conservation Commission. On his return trip to Michigan arrangements were made for Mr. Ligon to visit Shoals, Ind., to demonstrate methods of controlling coyotes, which have been causing much trouble in that locality.

Carlyle Carr was occupied during the month of April assisting extension service officials in Maryland in demonstrating methods of controlling rats, and making preliminary arrangements for more extended work at a later date. He also visited points in Indiana, Illinois, and Michigan to assist in organizing a number of community campaigns in localities from which requests had been received for demonstration in methods of controlling rats. He reports that much interest is being taken in this work.

F. E. Garlough will be transferred at an early date from leadership of rodent control work in California to investigational work under the project Eradication Methods. L. L. Laythe, a graduate of the Oregon Agricultural College, who has had experience as a county agent and who, for a considerable period, was employed in rodent control work in Arizona, associated with D. A. Gilchrist, has been appointed junior biologist in the California District to succeed Mr. Garlough. Mr. Laythe left Phoenix, Ariz., on May 5 for California.

Strychnine orders received and reports coming in from the field indicate that rodent control operations are moving forward on a large scale in the various western districts. Favorable weather conditions are making possible a high percentage of kill.

A. M. Day reports that the people of Wyoming are taking advantage of the new rodent-control law, which authorizes county commissioners to make arrangements for the establishment of pest control districts on petition of the landowners. The people of Star Valley, Lincoln County, were the first to organize a campaign under provisions of this law and other communities are rapidly taking steps to organize pest districts and to launch campaigns for the control of ground squirrels and prairie dogs.

The predatory animal forces have been busily occupied cleaning up poison stations used during the winter, in trapping renegade animals which had escaped poison, and in locating dens. Some excellent work has been done in getting adult animals and in securing the pups of both wolves and coyotes.

#### GAME AND BIRD RESERVATIONS

Smith Riley, in charge of Game and Bird Reservations, returned on April 25 from an inspection trip to various game and bird reservations, including Niobrara, Wind Cave, Bison Range, Elk Refuge, Deer Flat, and Big Lake. He also visited the Wichita Game Preserve, which is under the jurisdiction of the Forest Service.

Thirteen buffalo calves have so far been reported in the herds at the big game preserves - nine at Niobrara, two at Wind Cave, and two at the Bison Range.

Eighteen elk were found dead at Sullys Hill Game Preserve, N. Dak., during the month of April. The elk began to shed their winter coats, during the warm days in January and the early part of February, after which the weather turned very cold and the animals suffered accordingly. It is believed that the severe weather conditions and the fact that the animals all had many ticks were responsible for the deaths. Some of the elk, however, perished either in a big storm in February or during a severe one in March.

Additional losses in the band of antelope at Wind Cave Preserve have been reported, in spite of all that Warden Chambers and Trapper John N. Martin can do to save them. Three coyotes have been taken inside the preserve and 15 outside.



Ludwig Bethel, Warden of the Key West and Tortugas Keys Reservations, Florida, with headquarters at Key West, has gone to Tortugas Keys to remain during the nesting season. He reports the first birds there on April 20 and the first egg seen on April 23; also that there is a considerable growth of bay lavender on the Key which will be quite a protection to the young birds.

Warden Wm. Jenkin, Jr., of the Chase Lake Reservation, N. Dak., reports a heavy migration of birds to the refuge this spring.

T. N. Marlow, State Game Commissioner, liberated 18 Hungarian partridges at the Bison Range on April 18.

Several violent earthquake shocks, more severe than the one which occurred on March 22, were felt through the Jackson Hole country in the vicinity of the Elk Refuge on March 24. Rocks weighing tons were shaken loose along the Tetons and in the hills about Gros Ventre and rolled into the valley.

The latest report from Almer P. Nelson, acting in charge of the Elk Refuge, states that during the winter approximately 3,400 elk - 1,500 at headquarters and 1,900 at the Germain tract - have been fed at the Refuge. It was thought that the feeding, which began on January 23, would be continued until about April 25. Of the 1,500 elk fed at headquarters, only 47 have died. Two calf corrals were built to separate the calves from the older animals when feeding and since these have been constructed the calf loss has been small.

A representative of the Pathe Film Corporation accompanied by Forest Supervisor A. C. McCain, of the Teton National Forest, visited the Elk Refuge last month and took pictures of the elk feeding there.

The following paragraphs are copied from "Teton News Topics" for April, a mimeographed sheet issued at the headquarters of the Teton National Forest:

"In order to study the distribution, movements, etc., of the elk, the Biological Survey decided last winter to tag several hundred elk calves. The tagging for the southern herd was scheduled to take place on the Government ranch east of Jackson, where the calves have been fed in a separate corral from the older animals the past winter. Accordingly, on March 26, Ranger Buchenroth went out to help Warden Almer Nelson tag his pets.

"In one corner of the feeding corral a smaller corral had been built, with a narrow chute leading to the outer field. Hay was dumped in the calf pasture, and after a sufficient number of calves had entered, the gates were closed. Then Buck and Almer undertook to get them into the chute. The calves, on seeing dismounted men in the corral with them, simply went wild but finally about 50 head were penned up in the smaller corral. Here they milled like jack rabbits until practically exhausted (Buck and Almer ditto) but only three head out of the bunch landed in the chute. These were tagged in the right ear as per instructions. Whether these three told the others or whether they were dissatisfied with being hazed by Buck and Almer remains in doubt, but no more could be run into the chute. By reaching through the bars of the corral and getting one more by the ears another was tagged. The net result of the day's

work was a total of four elk tagged, some exhausted men and calves, and a wrecked corral. We forgot to mention that the calves attempted to make a sandwich of Buck and Almer by tipping a section of the corral over on them and using it for a gangplank in the grand getaway."

"We quote from the Acting Forester's letter to the Biological Survey of January 19 last:

"It seems quite evident that there will be comparatively little trouble in tagging a sufficient number of the elk in the Jackson Hole herd to make a good test and find out something as to the drift of these animals outside of the Jackson Hole range."

#### IMPORTATIONS

During the month of April the number of foreign birds imported into the United States under permits from this Department amounted to 17,727, of which 13,962 were canaries.

The last consignment of quail from Mexico was entered at Laredo, Tex., on April 14. Owing to restrictions imposed by the Mexican authorities, the season for the importation of quail, which would have extended to April 30, was brought to an abrupt close before the middle of the month. The total number of birds imported this year was 9,123, the smallest number imported in any season since 1918. Of these, 1,400 were brought in at Laredo and 7,723 at Brownsville. None were entered at Eagle Pass.

#### Migratory Bird Treaty and Lacey Acts.

Talbott Denmead, Deputy Chief Game Warden, addressed the Forest and Stream Club at its banquet at Westminster, Md., on the evening of April 6.

The sympathy of members of the Washington office is tendered P. S. Farnham, U. S. Game Warden, whose father died on May 5.

Orin D. Steele, of Wollaston, Mass., was appointed U. S. Game Warden, effective May 1, with headquarters at Council Bluffs, Iowa. His district embraces the State of Iowa. Mr. Steele had served as U. S. Deputy Game Warden since December 1, 1919. His name was certified from the list of eligibles obtained from the Civil Service examination held on November 22, 1922, for the position.

Congratulations and best wishes are tendered Warden Stadlmeir from friends in the Washington office on the birth of a son, Wesley Girard, April 26.

Regulation 8 of the Migratory Bird Treaty Act Regulations was amended, effective April 10, 1923, to provide that persons may possess and transport for their own use, without a permit, live migratory waterfowl now lawfully possessed or hereafter lawfully acquired by them, but may not purchase or sell such waterfowl without a permit. The amendment also provides that a State or municipal game farm or city park may possess, purchase, sell, and transport live waterfowl without a permit, but no such waterfowl can be purchased from or sold to a person (other than such State or municipal game



farm or city park) unless such person has a permit. It is further provided in the amendment that feathers of wild ducks and wild geese lawfully killed and feathers of such birds seized and condemned by Federal or State game authorities may be possessed, bought, sold, and transported for use in making fishing flies, bed pillows, and mattresses and for similar purposes, but not for millinery or ornamental purposes.

The following appointments were made to the position of U. S. Deputy Game Warden during April:

Philip Del Fungo-Giera, 144 Harmon Ave., Pelhamwood, Pelham, N.Y.  
 Harris P. Bass, 5120 Nebraska Ave., Tampa, Fla.  
 Lloyd D. Mitchell, Box 351, Oshkosh, Wis.  
 Barrett P. Smith, 49 Bay Shore Ave., Bay Shore, N. Y.  
 William H. Bergtold, 1159 Race St., Denver, Colo.  
 N. H. Engram, R. D. No. 1, Fort Gaines, Ga.  
 George Franckies, Savanna Proving Grounds, Savanna, Ill.

Appointments of the following U. S. Deputy Game Wardens were terminated during April:

L. J. Brown, R. D. No. 3, Chism, Montgomery, Ala.  
 Eric C. Haehnel, 357 N. Sheffield Ave., Hammond, Ind.  
 John E. Brown, Commercial Hotel, Kennewick, Wash.  
 Robert B. Pacetti, Daytona, Fla.

#### Cases Reported to Solicitor for Prosecution During April

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	1	Missouri	Possessing ducks in close season
Birsch and Capps*	1	Virginia	Killing swan
Birsch and Capps*	1	"	Possessing swan
Brown*	1	Alabama	Possessing geese and ducks without Federal permit
Bloxsom and Keene**	3	Maryland	Hunting geese at night
Linebaugh, Boone**, and Blackwell**	1	Indiana	Selling wild ducks
Shaver and Turnbull**	2	Minnesota	Hunting ducks after sunset
Shaver and Boomer*	2	Wisconsin	Purchasing ducks
Shaver and Boomer*	1	"	Selling ducks
Shaver and Dunham**	1	"	Hunting ducks prior to half an hour before sunrise
Shaver and Dunham**	1	"	Hunting ducks in close season

## Cases Reported to Solicitor for Prosecution During April (Continued).

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Steele and Stetson**	3	Washington	Hunting ducks after sunset.
Visart	1	Arkansas	Killing duck in close season
"	1	Oklahoma	Offering aigrettes for sale
"	1	Arkansas	Hunting ducks in close season
"	2	"	Hunting ducks from powerboat
Whitehead	4	Georgia	Killing doves in close season

## Migratory Bird Treaty Act Cases Terminated - Reports Received During April.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barneier	1	Missouri	Possessing plumes of herons	\$50 and costs
Berquist and Vanselow*	1	Illinois	Killing loons	\$10
Brown*	1	Alabama	Killing flickers	\$10
"	1	"	Possessing geese and ducks without permit	\$15
Farnham	1	Maryland	Hunting ducks after sunset	15 days in jail
Maple*	1	Illinois	Selling ducks	\$100
Merrill	5	"	Possessing ducks in storage in close season	\$25 each
"	2	"	Possessing ducks in storage in close season	\$10 each
Pacetti	1	Florida	Offering to sell ducks	\$ 5
Shupce	1	Texas	Possessing bittern	\$10
"	2	"	Killing insectivorous birds	\$ 5 each
"	1	"	Hunting ducks after sunset	\$ 5
"	2	"	Killing sandpipers	\$25 each
"	1	"	Killing meadowlarks	\$25
"	1	"	Killing flicker	\$ 1
Stadlmeir	1	Maine	Wounding gull	\$ 5
Steele and Cornell**	1	Oregon	Killing band-tailed pigeons	\$ 5
Steele and Marco**	3	Washington	Killing ducks after sunset	\$25 each
Visart	1	Arkansas	Killing duck in close season	\$ 5
"	1	"	Hunting ducks after sunset	\$ 5
"	2	"	Selling ducks	\$50 each
Yerger***	1	Mississippi	Killing doves in close season	\$50 and costs of \$48.48

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Former U. S. Deputy Game Warden

# THE SURVEY

Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.



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No. 6

## GENERAL NOTES

Doctor Nelson attended a conference in New York City on June 7 and 8, called by Stephen T. Mather, Director of the National Park Service, for the purpose of considering the deer problem now existing on the Grand Canyon Game Preserve, Kaibab National Forest, northern Arizona. Measures were discussed for handling the surplus deer in the most practical manner. Among those attending the conference were representatives of the National Park Service, Camp Fire Club of America, Boone and Crockett Club, American Game Protective Association, and others interested in conservation.

Few changes were made in the list of officers and membership of committees of the American Society of Mammalogists, at the Philadelphia meeting, May 15 to 17. Doctor Nelson was re-elected president for the third year and Dr. H. H. T. Jackson, secretary, for the fifth year. The committees on Publications, on Economic Mammalogy, and on the Allen Memorial are unchanged; the committee on Life Histories of Mammals is also unchanged in membership, but Dr. W. P. Taylor was made chairman; the name of A. B. Howell was added to the committee on Anatomy and Phylogeny; the Bibliography Committee was completely reconstituted, with Dr. Lee R. Dice as chairman--E. A. Goldman being made a member; Dr. T. S. Palmer was made chairman of the committee on Marine Mammals; and a Membership Committee was created, consisting of Doctor Jackson and N. Hollister. The changes here noted are for the most part only those concerned with the staff of the Biological Survey.

Ira N. Gabrielson, Assistant Biologist, Glenn R. Bach, Predatory Animal Inspector, Leo K. Couch, Biological Assistant, and George Tonkin, Geo. E. Mushbach, and Ray C. Steele, U. S. Game Wardens, attended the Fourth Annual Sportsmen's and Tourists' Fair, at Spokane, Wash., May 22-25.

The following publications of the Bureau were received in May:

Service and Regulatory Announcement No. 54, "Regulations for the Importation of Eggs of Game Birds for Propagation." Received May 7.  
Department Bulletin No. 1145, "Migration Records From Wild Ducks and Other Birds Banded in the Salt Lake Valley, Utah," by Alexander Wetmore. Received May 10.  
Farmers' Bulletin 869 (Rev), "The Muskrat as a Fur Bearer," by David E. Lantz. "Issued April, 1923," received May 15.  
Farmers' Bulletin 1302, "How to Get Rid of Rats," by James Silver. "Issued April, 1923," received May 15.



Among manuscripts submitted for outside publication in May were:

Ashbrook, Frank G., "Blue Fox Production in Alaska," for the Black Fox Magazine.

Bailey, Vernon, "The Virginia Opossum and Its Ways," for Nature Magazine.

Howell, A. H., "James Hibbert Langille, Obituary Notice," for The Auk.

Jewett, Stanley G., "Ospreys in Modoc County, California," for California Fish and Game.

McAtee, W. L., and J. R. Malloch, "Notes on American Bactrodinae and Saicinae (Heteroptera: Reduviidae)," for the Annals of the Entomological Society of America.

Oberholser, Harry C., "February and March Birds at Washington, D. C.," for Bird-Lore.

-----"Bird Banding as an Aid to the Study of Migration," for The Auk.

Silver, James, "The Reproductive Potential of Rats," for the Journal of Mammalogy.

-----"Destroying Animal Pests in Their Burrows with Hydrocyanic-acid Gas," for the Rural New Yorker.

#### BIOLOGICAL INVESTIGATIONS

Mr. Goldman attended the Third National Conference on State Parks at the Turkey Run State Park, Indiana, May 7-9, in order to take part in a discussion of plans of the Bureau for fostering the conservation of wild animal life, for which National and State reservations are well adapted.

Dr. H. C. Oberholser left Washington on June 5 for Charleston, S. C., to make an investigation of the bird life on Government Lighthouse and Military Reservations, as well as in certain localities inhabited by breeding water birds. These data are desired for use in connection with the establishment of bird reservations. The work necessary to obtain a satisfactory understanding of the status of the more important breeding areas on the South Carolina coast will probably require about three weeks.

A. H. Howell returned on May 14 after two months of field work in central Florida, most of which was conducted in cooperation with Herbert M. Brandt, of Cleveland, Ohio, who is engaged in making a scientific collection of birds' eggs. Among the more important birds found breeding were the sandhill crane, white ibis, caracara, short-tailed hawk, burrowing owl, pileated woodpecker, and Florida jay. The special object of the trip was to locate, if possible, nesting colonies of the everglade kite, which lived in abundance there prior to the draining of the Everglades, but although several of their favorite nesting localities were visited, no kites were seen until toward the close of the work. Mr. Howell made a short side trip in company with Warden B. J. Pacetti to examine the egret colonies in Volusia County, near Maytown.

Bird-banding experiments in the Arctic are to be conducted in connection with a United States Geological Survey expedition, which sailed on June 6 from Seattle, Wash., for Nome, Alaska, planning to spend the summer between that place and Point Barrow. Included in the party is Capt. Joseph F. Bernard, of Montreal, Quebec, who has spent many seasons on the Arctic coast of America as captain of a whaling vessel. Captain Bernard has been supplied by the Survey with aluminum bands and it is hoped that he will be able to band numbers of



ducks and geese whose northernmost breeding grounds are found in the area that will be visited by the party. During his northern trips Captain Bernard has specialized in the study of the nesting of waterfowl and shorebirds, a training which speaks well for the success of the volunteer work which he has undertaken.

#### ALASKA INVESTIGATIONS

Walter G. Culver, who has been a fur warden with headquarters at Juneau, has resigned, effective May 15.

O. J. Murie, Assistant Biologist, located at Fairbanks, is making preparations for capturing a few caribou bulls near Mount McKinley National Park, for experimental purposes in crossing with reindeer.

Chief Fur Warden E. P. Walker arrived in Washington on the afternoon of May 30, for a conference pertaining to Alaskan matters. He began the return trip on June 2 and expects to reach Juneau, Alaska, about June 25. Sympathy is extended to Mr. Walker in the recent death of his mother, at Sheridan, Ind.

The Bureau's sea-going power boat Sea Otter is now at Seattle, Wash., where necessary repairs will be made on it before its return to Alaskan waters. It is expected that the work of repairing will be completed early in July.

The Alaska legislature, which recently adjourned, passed three bills bearing directly on work of the Bureau. One provides for the branding or marking of reindeer by owners; another for the registering of brands in connection with the propagation of blue foxes; the third appropriates \$10,000 for procuring and transporting deer to the islands of Prince William Sound, and to Kenai Peninsula and adjacent waters, and for the introduction of goats on Baranof and Chichagof Islands. A bounty of \$1.00 for each eagle killed in the Territory was provided for, and the license tax on furs shipped out of the Territory was changed, reducing the tax on many skins.

#### ECONOMIC INVESTIGATIONS

Doctor Fisher left the Washington office on June 1 for a trip to Michigan, where he will investigate predatory animal conditions.

Doctor Bell left Washington on May 13 for an extended trip in the field. He will study predatory animal and rodent conditions in South Dakota, North Dakota, Montana, Wyoming, Colorado, and New Mexico.

Miss Mae I. Kivlin was transferred from the Bureau of Plant Industry to a stenographic position in this division on May 25.

It is with regret that we announce the death of Mrs. Ray T. Jackson, which occurred at Portland, Oreg., on May 9. Sympathy is extended to Mr. Jackson in his bereavement.

F. G. Ashbrook attended the International Fur Exposition in New York City, May 7 to 9, and delivered an address on the work of the Biological Survey relating to fur-bearing animals.

A. M. Day, Biological Assistant in charge of the rodent work in Wyoming, spent a few days in checking over last year's campaign in the Hat Creek District with County Agent Mendenhall. In driving the entire length of the thirteen-mile strip which was poisoned last summer, only one live prairie dog was seen. The ranchers adjoining this district are now anxious to get started in a rodent campaign.

R. A. Martin, formerly president of the Sheep and Goat Raisers Association of Texas, reports it as his opinion that Hunter Joe Smith poisoned 1,000 coyotes on his ranch during April.

Inspector Young, of the Colorado District, reports the following: While working on a ranch on the east side of the Springs Creek Mesa, Colo., Assistant Inspector Trickle discovered two coyote dens about 30 feet apart and succeeded in shooting an old female at the entrance of one of them. He then plugged both dens and returned to headquarters for a shovel. Late in the afternoon he again reached the dens and on digging out the first one found four large coyote pups and two small ones. The difference in size was explained when he dug out the other den and found another adult female coyote, three large pups, and three small ones. Without a doubt the litters of the two mothers had become intermingled in one or the other den. As these two dens were assumed to be separate establishments of a polygamous family, a trap was set for the male and he was caught the next morning.

James Silver left on June 7 for Georgetown, S. C., to conduct a demonstration anti-rat campaign in Georgetown County. Arrangements are being made for similar campaigns in New Jersey, Massachusetts, and Rhode Island.

Forrest L. Riddel, of Miller, Wyo., was successful in trapping an old three-legged gray wolf that has had her foot off for almost three years. During August, 1920, this animal got into a drag hook set, but after running and fighting the trap for a quarter of a mile the swivel broke and she made her escape into the rough, rocky mountains near Splitrock, Wyo. The hunter who had set this trap informed Mr. Bayer that he wanted to quit the job and also said some animal had escaped with a #14 trap. Mr. Bayer took up the line and found the trail of the wolf but after trying for three different mornings at daybreak to catch her while she was feeding on crickets in the open country, he gave up. Her litter of 8 pups was trapped during 1920, but she kept clear of traps and poison baits until Hunter Riddel trapped her. Evidently Hunter Riddel got up before daybreak.

Inspector Musgrave says coyote poisoners are finding fewer coyotes this year in the northern part of the State than ever before. This demonstrates more clearly than ever that the coyote in Arizona is becoming scarcer and that few of the coyotes that came down over the sheep trails in the fall got back to the northern range alive.

B. J. Melton says recent experiments with special processed tasteless strychnine promise great improvement in poisoning prairie dogs. On one area on the Wichita National Forest and Game Preserve, where very poor results were obtained with our standard formula, approximately 98 per cent of the



prairie dogs were killed with the improved poison.

Otis Wade, Biological Assistant, in charge of rodent work in Kansas, has tendered his resignation, effective June 30. Mr. Wade will take charge of the extension work in entomology at the University of Missouri. We regret to lose the services of Mr. Wade, who has made such an excellent record in Kansas. He carries our best wishes to his new field in which we have no doubt he will make a decided success.

The Texas office has been moved from 331 Federal Building, San Angelo, to 422 Oppenheimer Building, San Antonio.

#### FOOD HABITS RESEARCH

Remington Kellogg visited Cornell University during the last week in May for the purpose of securing stomach contents of toads from the collections there. Through the kind cooperation of Dr. A. H. Wright we were thus able to add over 300 stomachs to our collection. This material consisted mainly of the oak toad and the southern toad.

#### GAME AND BIRD RESERVATIONS

Mr. Riley went to Niobrara Reservation early in May where he is supervising the construction of the big-game fence on the northern part of that refuge. He also visited Sullys Hill Game Preserve, N. Dak., and Belle Fourche Bird Reservation, S. Dak., during the month.

F. M. Dille, warden of Niobrara Reservation, is engaged in arranging details for the construction of the big-game fence at the reservation, and is also directing and assisting the force of laborers working on the project. A. P. Chambers, Warden of Wind Cave Game Preserve, has been detailed to Niobrara until June 30 to assist in the construction work, which it is hoped can be completed by that date.

We regret to announce that D. C. Nowlin, who has been in the employ of the Bureau since March 6, 1911, found it necessary, on account of ill health, to give up active work and therefore to resign from the service on May 31. Mr. Nowlin was warden of the Elk Refuge until last November when he was transferred to Niobrara Reservation, Nebr. His long and faithful service is much appreciated and he has the best wishes of the Bureau for his welfare and restoration to health. His home is now at Lenore, Wyo.

George M. Riddick, warden of Walker Lake Reservation, Ark., reports that depredations have been committed at the reservation and that some egrets have been killed. He has been making an investigation with a view to apprehending those guilty.

Very high water was reported at Big Lake Reservation during May. Heavy rains caused the water to rise higher than it had been at any time since the Mississippi River levee broke in 1913. Great damage was done to crops in that vicinity.

Additional losses have occurred in the elk herd at Sullys Hill Preserve, and Doctor Brady, of the Bureau of Animal Industry, has made several visits to determine, if possible, the cause of so many deaths in this herd.

Inspector Knowles, of the South Dakota District, visited the Wind Cave National Park about the middle of April and saw 8 antelope. Hunter Martin, of the Economic Investigations field force, who has been trapping bobcats and coyotes in the park, found where coyotes had killed and eaten a buck antelope. Hunter Martin took 8 old coyotes and 2 bobcats from the park during April.

#### IMPORTATIONS

During the month of May the number of foreign birds imported into the United States under permits from the Department amounted to 18,003, as compared with 17,727 in April.

It is customary for the inspectors of foreign birds at the ports of New York and San Francisco to examine shipments for six months at a time, the exchange of duty being made about the beginning of the calendar and fiscal years. In order to accommodate the inspectors who have been on duty this spring and have plans for field work during the summer, the change took effect June 1, W. De Witt Miller taking over the inspections from B. S. Bowdish at New York, and Tracy I. Storer relieving H. C. Bryant at San Francisco.

During the meeting of the American Society of Mammalogists in May a census was made of the parrots on exhibition in the gardens of the Zoological Society of Philadelphia. This collection, one of the largest in the country, now contains 63 species, or about one-third of all the species of parrots that have ever been imported into the United States.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

Mr. Lawyer addressed a meeting of sportsmen in Norfolk, Va., on the evening of May 7, at which time a game protective association was formed. The meeting was also attended by M. D. Hart, Secretary of the Department of Game and Inland Fisheries, Richmond, Va. Considerable enthusiasm was displayed, indicating that the association will develop into one of the strong factors for game protection in Virginia.

On June 4 Mr. Lawyer returned to Washington after a three weeks' vacation in northern New York.

Mrs. Pauline H. Brodt was appointed typist in this Division on May 15 for temporary duty.

Garnett W. Saye, Deputy Warden, Albany, Ga., reports that the pecan orchards in that State are affording excellent nesting places for doves and that these birds are fast leaving the pine thickets and fence rails for these orchards. He states that the owners of pecan groves forbid hunting therein, as the shots injure the trees, so that the birds receive absolute protection in practically all of the groves. Mr. Saye also states that the nesting of the doves in the orchards is not considered as detrimental to the industry.



The following appointments were made to the position of U. S. deputy game warden during May:

Lenox C. Petree, 222 Montazuma, Santa Fe, N. Mex.  
 Olan M. Thurston, 1230 W. Adams St., Los Angeles, Calif.  
 Spence D. Turner, 904 Hall of Records, Los Angeles, Calif.  
 Stuart J. Flintham, 904 Hall of Records, Los Angeles, Calif.

The appointment of Joseph Bell, of Belen, N. Mex., as U. S. deputy game warden was terminated, effective April 30.

Migratory Bird Treaty Act Cases Terminated - Reports Received during May.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen*	1	Iowa	Selling ducks	\$5 and costs of \$12
Barmeier	1	Missouri	Killing wood duck	\$5
Bergquist* and Vanselow*	1	Illinois	Killing loons	\$10 and costs
Birsch	1	Virginia	Killing duck in close season	\$15
"	1	Virginia	Killing snipe in close season	\$25
Bloxsom	2	Maryland	Possessing ducks in storage in close season	\$1 each and costs
Bloxsom	2	Virginia	Hunting curlews	\$25 each
Bloxsom and Derrickson**	1	Virginia	Hunting ducks from motorboat	\$25
Hoffman	6	Alabama	Killing doves in close season	\$5 each
Kelsey	1	South Dakota	Offering to sell ducks	\$25
Linebaugh	1	Kentucky	Killing doves in close season	\$10
"	1	Kentucky	Hunting doves in close season	\$25
Oliphant*	2	Virginia	Killing sandpipers	\$5 each
Perry	1	Mississippi	Killing snipe in close season	\$12.50
Ransom	1	Idaho	Killing ducks after sunset	\$25
Shaver and Lawton*	3	Minnesota	Hunting ducks after sunset	\$10 each
Shaver and Johnson**	1	Minnesota	Selling ducks	\$10
Shaver and Andersen*	3	Iowa	Killing ducks in close season	\$5 and costs of \$21.77 each
Shaver	2	Minnesota	Hunting ducks after sunset	\$2.50 each
"	1	"	Hunting ducks after sunset	\$10
"	1	"	Killing woodpeckers	\$10
Steele and Clark**	1	Oregon	Possessing ducks in storage in close season	\$5
Steele and Stetson**	4	Washington	Hunting ducks after sunset	\$25 each

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Tieken*	5	Iowa	Killing ducks in close season	\$5 each and costs totaling \$124.65
Tonkin	2	Oregon	Killing ducks in close season	\$10 each
"	1	"	Killing avocets	\$20
"	1	"	Possessing swan down	\$25
Whitehead	6	Georgia	Killing doves in close season	\$10 each and costs

## Cases Reported to Solicitor for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Andersen*	1	Illinois	Killing ducks in close season
"	5	Iowa	Possessing ducks in close season
Barmeier	1	Missouri	Possessing ducks in close season
Beckwith*	1	Iowa	Selling ducks
"	1	"	Purchasing and possessing ducks in close season
Bloxson and Derrickson**	1	Virginia	Killing more than limit of brant
Chemberlin*	1	Indiana	Killing ducks in close season
Fidler	1	Illinois	Killing ducks in close season
Fleming*	2	Indiana	Killing ducks in close season
Fleming*, Barber, ** and Randall**	5	"	Hunting ducks in close season
Fleming*, Barber, ** and Walker**	3	"	Hunting ducks in close season
Hard*	1	Ohio	Killing ducks in close season
Holmes	5	Iowa	Killing ducks in close season
"	4	Nebraska	Killing ducks in close season
Holmes and Kendall**	2	"	Killing ducks in close season
Merrill and Scholler*	2	Iowa	Killing ducks in close season
" "	2	Indiana	Killing ducks in close season
" "	4	Illinois	Killing ducks in close season
" "	2	"	Killing bluebirds
" "	5	"	Possessing bluebirds in close season
Miller	2	Maryland	Hunting ducks in close season
Mitchell* and Kleist**	1	Wisconsin	Possessing ducks in storage in close season
Perry and Dickerson* *	1	Tennessee	Killing a flicker
" " "	1	"	Killing a dove
" " "	14	"	Possessing ducks in storage in close season

Perry	3	Tennessee	Hunting ducks in close season
"	1	Mississippi	Killing wood ducks
Ransom	1	Idaho	Possessing ducks in storage in close season
Shaver and Fidler*	2	Illinois	Hunting ducks in close season
Smith and Stadlmeir	1	Maine	Shipping partridges out of State
Smith,	2	"	Killing ducks in close season
Steele, Marco, ** and Sweet**	1	Washington	Killing coots in close season
Tonkin	1	Oregon	Killing avocets
"	3	"	Killing ducks in close season
Visart	1	Arkansas	Selling ducks
"	1	"	Hunting ducks from powerboat
"	1	"	Possessing ducks without permit
Whitehead	1	Georgia	Killing bobolinks
"	1	"	Killing snipe in close season
"	13	"	Killing doves in close season

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\*\* Deputy State Game Warden

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# THE SURVEY

Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.

Vol. 4.

Washington, D. C., July 12, 1923.

No. 7

## GENERAL NOTES

Dr. Geo. Finlay Simmons, of the State University of Texas, now engaged in organizing the work of the State Game, Fish, and Oyster Commission, came to Washington for a conference with Doctor Nelson in relation to this work on July 9.

Thomas E. Jacoby has been appointed Secretarial Clerk to the Chief, effective July 1. Arthur P. Weinerth succeeds him as Chief Clerk and Executive Assistant, and will continue in charge of the office of supplies and of the property records.

Mr. Henderson, with his family, will spend several weeks visiting relatives in Nova Scotia after motoring from Washington, D. C., to that Province.

Mahlon A. Glasscock has been appointed messenger boy to assist during the vacation period.

The following publications of the Bureau were received in June:

Department Bulletin No. 1151, "Silver-Fox Farming," by Frank G. Ashbrook. Received June 15.  
Farmers' Bulletin No. 587 (revised), "Economic Value of North American Skunks." Received June 19.  
Farmers' Bulletin No. 1327, "Canaries: Their Care and Management," by Alexander Wetmore. Received June 27.  
North American Fauna No. 46, "A Biological Survey of the Pribilof Islands, Alaska," by E. A. Preble, W. L. McAtee, and various entomologists. Parts I and II (separates), issued May 29; received June 27 and 26, respectively.

Among manuscripts submitted for outside publication in June were:

Bailey, Vernon, "The Carolina Gray Squirrel (Sciurus carolinensis carolinensis) Gmelin," for Nature Magazine.  
-----"The Eastern Deer Mouse, Woods Mouse, or White-footed Mouse (Peromyscus leucopus noveboracensis)," for Nature Magazine.  
Hanson, Karl B., and H. L. VanVolkenberg, "Notes on the Treatment of Foxes with Carbon Tetrachloride, and the Use of Soft Elastic Globules for Preventing Inhalation-Collapse," for the Journal of the American Veterinary Medical Association.

- Kellogg, Remington, "Description of an Apparently New Shark-toothed Cetacean from South Carolina," for the Smithsonian Miscellaneous Collections.
- Lincoln, F.C., "The White Ibis (Guara alba) in California," for the Condor.
- Nelson, E. W., "Community Protection of Migratory Wild Fowl in Florida," for American Forestry.
- Oberholser, Harry C., "April and May Birds About Washington, D. C.," for Bird Lore.
- "Migration of North American Birds, XXII: Bullock Oriole and Hooded Oriole," for Bird Lore.
- Taylor, W. P., "A Review of Records of the Trumpeter Swan in the State of Washington," for the Wilson Bulletin.

### BIOLOGICAL INVESTIGATIONS

The scientific work now being done in the Hawaiian group and other islands in that region is proving very successful. The rabbits on Laysan, as well as a less serious infestation on another island, have been exterminated. Several species of plants of varying habit, suitable to the locality, have been introduced, and the restoration of vegetative conditions at least equal to the original state of the island seems assured. Landings and collections of importance have been made on a number of islands and a consignment of specimens of interest has already been received in Washington. These include good series of most of the characteristic species of the islands, many of them peculiar, and of the interesting Hawaiian seal. Donald R. Dickey of Pasadena, Calif., who accompanied the party for the purpose of making motion pictures of the interesting bird life of Laysan, was successful in his work, and has returned to the States. Charles E. Reno, having finished his special duty, that of exterminating the rabbits, has also returned.

Dr. W. P. Taylor spent the first week in June in San Diego County, Calif., investigating alleged damage to grain by band-tailed pigeons. The damage was found to be limited to a single tract of sixty acres; better methods were recommended for handling the crop to lessen or eliminate the losses.

### ALASKA INVESTIGATIONS

O. J. Murie, assistant biologist, investigating the caribou herds of the Territory, is now in the Mount McKinley Park region to capture young caribou bulls for experimental purposes in crossing with reindeer. Arrangements have been completed for transporting them down the Yukon River.

L. J. Palmer, in charge of reindeer grazing investigations, left Nome, July 2, with the Bureau's power schooner Hazel for Kotzebue Sound on a month's reconnaissance among the reindeer herds along the coast of that region. Fur Warden Frank Dufresne accompanied him in order to check up trapping operations of the past winter.

A list of blue fox farmers in Alaska has been prepared for distri-



bution, giving their post-office addresses and the names of the islands occupied. There are now 90 blue fox farmers located in southeastern Alaska, 25 in the Prince William Sound region, 8 in the lower Cook Inlet region, 13 in the Kodiak-Afognak region, and 10 on islands off the Alaska Peninsula region--a total of 146.

Chief Fur Warden E. P. Walker has returned to Juneau, leaving the superintending of repairs on the Sea Otter at Seattle, Wash., to Captain K. C. Talmage. The boat will be ready to return to Alaskan waters about August 1. When Mr. Walker left Seattle, on June 20, he had charge of a shipment of twelve snowshoe rabbits, which will be liberated on a large island within the Tongass National Forest, southeastern Alaska, as an experiment in stocking the island for a food supply for foxes.

### ECONOMIC INVESTIGATIONS

James Silver and Carlisle Carr will leave on July 16 for Parsons Island, Maryland, to demonstrate the control of rats under plague conditions. The rats on this island have increased to a point where they threaten serious destruction of animal and vegetable life.

A. E. Gray, formerly in charge of rodent work in Texas, has been placed in charge of this branch of the work in New Mexico. C. F. Bliss, who has been in charge of rodent and predatory animal work in New Mexico, having resigned on June 30. Before going to New Mexico Mr. Gray spent several days in the Washington office; he has been very successful in rodent control in Texas. L. C. Whitehead, who formerly assisted Mr. Gray in Texas, has been placed in charge of that district. E. L. Pineau, assistant predatory animal inspector in New Mexico, has been placed temporarily in charge of the predatory animal work in that State.

It is noted from D. A. Gilchrist's last report on rodent work in Arizona that Karl M. Fisher states he can not find a live prairie dog in Cochise and Graham Counties, nor can he find any person who knows of any prairie dogs remaining at any point within the two counties. This shows an excellent piece of clean-up work on the part of the Arizona force.

L. K. Couch and John Finley, biological assistants in charge of rodent work in Washington, have completed a successful campaign against woodchucks. These rodents had been doing considerable damage to crops in that State.

The California Legislature has passed a bill appropriating \$50,000 for the biennium, for predatory animal work.

F. E. Garlough, formerly district leader in charge of rodent work in California, was transferred on June 15 to the Denver laboratory to assist Mr. Piper in his work on the eradication methods project. Mr. Garlough was called to the Washington office for conferences the latter part of June. L. L. Laythe assumed charge of the rodent work in California on June 15.

M. M. Smith, formerly employed as a clerk at San Antonio, Tex., has been transferred to Albuquerque, N. Mex.

Hunter Mullins, of the Arkansas district, succeeded in capturing a notorious wolf, known locally as Old Volivar, or the Cedar Mountain Wolf, together with his mate. The pups of this pair were also secured and the entire family has been added to the Bureau's collection.

Hunter J. M. Martin, of the South Dakota district, reports that the coyotes that infested the game pasture at the Wind Cave Game Preserve have apparently all been killed.

W. A. Knibbe, a successful hunter in the Arizona district, was injured early in June by being thrown by an unruly horse against a drag hook he was carrying on his saddle. The horse had been lent him by a Mexican rancher and was said to be gentle. Mr. Knibbe's injury has incapacitated him for work up to the present date.

It is very gratifying to note from L. J. Goldman's last report on the work in the Idaho district that where poison campaigns have been conducted stockmen report their losses the smallest for any year in the history of the sheep industry in that State.

#### FOOD HABITS RESEARCH

During the last ten days of June, W. L. McAtee made a survey of Jekyl Island, Georgia, with the view of learning what steps can be taken to make it more attractive to wild bird life.

H. L. Viereck, who has been in charge of the collection of Hymenoptera of the Division since December, 1915, and who has been making identifications in that group of insects secured from stomach examination, has tendered his resignation, effective June 28. Mr. Viereck has accepted a position in the entomological branch of the Canadian Department of Agriculture and will be located at Ottawa.

Dr. F. P. Metcalf, who has handled much of the botanical work of the Division in recent years, has also tendered his resignation, effective at the end of the fiscal year. Doctor Metcalf, having received his degree (Ph. D.) from Cornell University, will leave during the summer for China, where he will take up his new duties in the fall in charge of the botanical department of Fukien Christian University, Foochow, China.

#### GAME AND BIRD RESERVATIONS

Mr. Riley returned from the West on June 27, and on June 30 started for points in several of the Western States to make investigations looking to the conservation of antelope.

A. P. Chambers has returned to Wind Cave Preserve after spending a month at Niobrara Reservation assisting in the construction of the big-game fence there.



Many quail are reported at Niobrara.

The buffalo herds on the game preserves have been increased this season by the birth of 118 calves, as follows: Bison Range, 92; Wind Cave, 16; Niobrara, 8; and Sullys Hill, 2.

An unusual amount of rain has fallen during June at Wind Cave Preserve, but at Sullys Hill very dry weather prevails. One spring at the latter reservation is now dry, but there is still a sufficient supply of water for the animals.

Alfalfa on the Germain tract at the Elk Refuge was damaged on June 13 by a heavy frost, and it is feared this will affect the yield to some extent. At the Bison Range the grass is said to be in better condition than it has been for the past three years.

Practically all the exterior fences at the Elk Refuge were repaired in June, including a new pasture fence on the Germain tract, and additional harvesting and cultivating equipment have been purchased for use at the refuge.

B. J. Pacetti, warden of the Mosquito Inlet Refuge, Florida, states that the birds there have raised about as many young as usual, despite the excessive rains and wind storms which occurred during May and June. He says that there is more water in the woods in that vicinity than there has been at this season for more than 20 years.

George L. Hoffman, employee of the Reclamation Service, who has been acting as warden of the Minidoka Bird Reservation, Idaho, since April 1, 1919, has resigned to take effect at the termination of June 30, as he is moving from the vicinity of the reservation.

Perry E. Wetmore, warden of the Tampa Bay Group of Refuges, Florida, has been granted a six weeks' furlough, July 15 to August 31, during which time Geo. P. Wetmore will fill his place.

#### IMPORTATIONS

Under the regulations governing the entry of eggs of game birds the first permit for eggs was issued on June 27 for the importation from Calgary, Canada, of 39 canvasback duck eggs at Salt Lake City, Utah.

During the past year live birds have been imported from many foreign countries, including Argentina, Australia, Brazil, British East Africa, Canada, Colombia, Costa Rica, Cuba, Egypt, England, France, Germany, India, Mexico, Netherlands, New Caledonia, New Guinea, New Zealand, Nicaragua, Senegambia, Venezuela, and others.

## MIGRATORY BIRD TREATY AND LACEY ACTS.

Mr. Lawyer was in Erie, Pa., June 13 and 14, negotiating the purchase of a motorboat for use in patrol work on the Illinois River. A 36-foot motor launch was procured. On June 19 he left Washington on an official trip, visiting San Antonio, Tex., New Orleans, La., and Montgomery and Birmingham, Ala., in connection with the administration of the Migratory Bird Treaty Act and Regulations, returning to Washington on July 2.

The manuscript for the poster on open seasons for game for the fall of 1923 and the spring of 1924 has gone to the printer and it is hoped that copies will be available for distribution shortly after the middle of July.

U. S. deputy game warden appointments terminated during June were as follows:

George M. Hogue, Steele, N. Dak.  
William MacAlexander, 433 Riverview, Wichita, Kans.  
Henry Fox, Mercer University, Macon, Ga.  
Wilbur F. Smith, 198 Ely Ave., So. Norwalk, Conn.  
Walto L. Denalsano, Eagle Pass, Tex.

## Migratory Bird Treaty Act Cases Terminated - Reports Received during June.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen*	2	Minnesota	Hunting ducks prior to half an hour before sunrise	\$10 each
Barmeier	1	Missouri	Possessing ducks in close season	\$1
"	1	"	Killing wood ducks	\$150
Barmeier and Shaver	1	"	Possessing and transporting loon	\$100
Barmeier	2	Illinois	Hunting coots from motorboat	\$5 each and costs of \$26.60 each
Birsch	2	Virginia	Hunting ducks from motorboat	\$25 each
Bloxsom	1	Maryland	Selling ducks	\$10
Charlton, Hard, ** & Blizzard**	1	Ohio	Killing ducks in close season	\$125 and costs of \$19.15
Charlton, Hanes, * and Richter**	1	"	Possessing ducks in storage close season	\$25 and costs of \$12.20
Charlton	1	"	Killing loon	\$10 and costs of \$11.50
Farnham	1	Pennsylvania	Possessing pileated woodpeckers	\$10
Fleming*	1	Indiana	Killing geese in close season	\$10 and costs
Greiner*	2	Iowa	Killing ducks in close season	\$10 each and costs of \$15.10 each
Hoffman	1	Alabama	Killing doves	\$5
Holmes	1	Kansas	Killing ducks close season	\$5
Merrill	1	Illinois	Possessing ducks in storage close season	\$25
Mushbach	1	Montana	Possessing ducks in storage close season	\$10 and costs
Payton*	1	Iowa	Killing ducks in close season	\$25 and costs
Shaver	1	Missouri	Hunting ducks in close season	\$5
Shupee	9	Texas	Hunting ducks from motorboat	\$1 each
Tonkin	2	Oregon	Hunting ducks after sunset	\$10 each
"	1	"	Hunting ducks after sunset	\$1
Vanselow* & Berquist	2	Illinois	Hunting ducks close season	\$10 each
Whitehead	1	Georgia	Killing doves close season	\$15
		"	Possessing doves in storage in close season	\$5
	2	S. C.	Killing wood ducks	\$250 each and costs

\* U. S. Deputy Game Warden.



## Cases Reported to Solicitor for Prosecution.

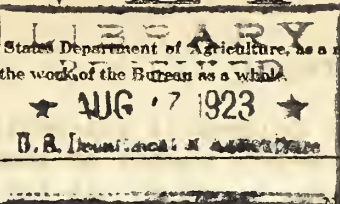
<u>Warden.</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Andersen*	2	Iowa	Killing ducks in close season
Barber** and Lapham**	1	Indiana	Hunting ducks in close season
Barmeier	1	Missouri	Possessing flickers and robins
"	9	"	Killing ducks in close season
Barmeier and Heller*	3	"	Possessing ducks in close season
" "	8	"	Killing ducks in close season
" "	3	Illinois	Hunting ducks from motorboat
Charlton and Harrison*	1	Ohio	Shooting ducks from motorboat
Charlton and Srofe**	3	"	Shooting ducks from motorboat
Farnham	1	Pennsylvania	Killing blue heron
Farnham and Kelly**	1	"	Attempting to kill a swan
Fleming*, Barber,** 4 and Rendall**		Indiana	Killing ducks in close season
Fleming*, Baldwin,** 4 and Randall**		"	Killing ducks in close season
Fleming*, Randall,** 1 and Walter**		"	Killing ducks in close season
Linebaugh, Boone, and Frey**	2	Kentucky	Hunting doves in close season
Monplasure	1	Iowa	Killing a goose in close season
Perry and Dickerson**	1	Tennessee	Possessing ducks in storage in close season
Shaver and Fidler*	2	Illinois	Hunting ducks in close season
Shaver and Gervais**	1	Minnesota	Hunting ducks in close season
Smith,	1	Maine	Killing geese in close season
Steele, and Russell**	1	Oregon	Hunting ducks after sunset
Visart	1	Arkansas	Selling goose
"	5	Texas	Killing yellowlegs in close season
Whitehead	1	Georgia	Killing bobolinks in close season
"	3	Florida	Killing great blue herons

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Vol. 4.

Washington, D. C., August 21, 1923

No. 8

## GENERAL NOTES.

The following publications of the Bureau were received in July:

North American Fauna No. 46, by E. A. Preble, W. L. McAtee, and various entomologists. (Complete.) Issued June 20. (Received July 12.)  
Poster No. 42--"Open Seasons for Game, 1923-24." Issued July 17, 1923.  
Department Bulletin No. 1165, "Report on Bird Censuses in the United States, 1916 to 1920," by May Thacher Cooke. Issued July 20, 1923.

Among manuscripts submitted for outside publication in July were

Garlough, F. E., "The Belding Ground Squirrel in the Sierra Nevada," for the Journal of Mammalogy.  
Jewett, Stanley G., "Additional Records of the European Widgeon in Oregon," for The Condor.  
Lincoln, Frederick C., "A Note on the Food Habits of the Sharp-tailed Grouse (Pedioecetes p. campestris)," for Proceedings of the Biological Society of Washington.  
Oberholser, Dr. Harry C., "The Saving of Swan Lake, Minnesota," for the Bulletin of the American Game Protective Association.  
-----"June and July Birds at Washington, D. C.," for Bird Lore.  
Silver, James, "Rodent Enemies of Fruit and Shade Trees," for the Journal of Mammalogy.

Myron P. Jacoby, a stenographer and clerk in the administrative office, has resigned to accept a place in the commercial world.

## BIOLOGICAL INVESTIGATIONS.

Late advices from Dr. Alexander Wetmore indicate that he is back in Honolulu, having completed his work on Wake Island, the last of the distant islands to be visited. After concluding certain necessary arrangements in Honolulu, Doctor Wetmore plans to sail for the States about August 25.

Mr. Goldman has made a successful trip to the Santa Rita Mountains, Arizona, among the interesting specimens taken being tree squirrels and shrews, both believed to be now collected for the first time on this range. He is now investigating the Santa Catalina Mountains. He was accompanied during part of the trip to the Santa Ritas by Dr. W. P. Taylor, who also assisted in a preliminary reconnaissance of the Catalinas. Besides assist-



ing Mr. Goldman at intervals during the latter part of July, Doctor Taylor made a number of short trips in the region about Tucson in the interest of jack rabbit and pocket gopher investigations.

T. H. Scheffer continued his investigations of the habits of injurious rodents during July, giving special attention to pocket mice.

#### ALASKA INVESTIGATIONS.

E. P. Walker, chief fur warden, left Juneau, July 23, on a trip of inspection to points along the southern coast as far west as Kodiak Island, and north to Fairbanks before returning to Juneau.

Elmer T. Forsling, field assistant in reindeer grazing investigations, with headquarters at Nome, will go to Point Barrow on the Bureau of Education boat Boxer this month, to investigate the reindeer herds along the coast in that extreme northern region.

The Biological Survey will be represented with an exhibit at the fair to be held at Juneau, September 21, 22, and 23, a booth 6 by 8 feet having been allotted by the management for the purpose.

Since December 1, 1922, the Bureau has received 1,831 reports of shipments of skins of land fur-bearing animals from Alaska. As usual, the muskrat heads the list in the number of skins exported.

#### ECONOMIC INVESTIGATIONS.

Frank G. Ashbrook and Dr. Karl B. Hanson have been making an extensive survey of locations suitable for establishment of the Fur Farming Experiment Station. A very favorable location was found at Saratoga Springs, N. Y., and a lease has been completed providing for the taking over of the property by the Bureau for this purpose as soon as certain improvements which the owner has agreed to make can be completed.

James Silver and Carlyle Carr have recently been engaged in testing out methods for the control of woodchucks and moles in Maryland.

A. E. Oman, who has been in charge of the rodent control work in Montana in cooperation with the Extension Service of the Agricultural College, has been transferred to Manhattan, Kans., where he will be in charge of similar work, succeeding Otis Wade who resigned, effective June 30. Otto E. Stephi, who has been assistant to Mr. Oman, has been placed temporarily in charge of the Montana work.

A. L. Bridenstine, who has been employed as field assistant in Kansas, also found it necessary to discontinue work early in August in order to care for personal business before returning to college.



August, 1923.

S. R. Horton, who has had extended experience in the Washington office of the States Relations Service and has more recently been engaged in private business in Kansas, has been employed by the Bureau and assigned as clerk in the office at Albuquerque.

J. A. Young has been employed as field assistant and assigned to the predatory animal work in New Mexico.

In addition to his duties in handling the predatory animal work in Oklahoma and Arkansas, E. F. Pope has been assigned to take charge of the predatory animal field operations which are being planned in Missouri in cooperation with the State Board of Agriculture. This work has been made possible through the appropriation of \$15,000 by the State legislature for use during the coming biennium.

All annual reports from leaders of predatory animal and rodent control work have been received. These indicate that most important progress has been made during the past fiscal year in developing these two important activities of the Bureau.

Ira N. Gabrielson, leader of the Oregon rodent control work, reports that one of the largest owners of real estate in the public market of Portland was so favorably impressed with work done under the leadership of Bureau representatives last year in destroying rats and in the establishment of rat-proofing measures that he has torn out the entire interior of two of the largest buildings in the market and is finishing them entirely with concrete with a view to making them completely rat-proof. Word has also been received from Little Rock, Ark., that, as a result of the anti-rat campaign which is being launched there, steps are being taken for the inauguration of a general cleanup campaign in the city and for the establishment of more satisfactory ordinances governing the construction and repair of buildings, the disposal of garbage, and the screening of food products. These are important and encouraging developments, indicating the far-reaching results that may come from the educational work done in connection with the inauguration of anti-rat campaigns. Successful conduct of such campaigns often serves as a stimulus for putting into effect other much needed improvements, in both rural and urban communities.

R. Scott Zimmerman, in charge of rodent work in North Dakota, reports that a great deal of interest was taken this year in the display and demonstration made by the Bureau at the State Fair at Grand Forks, the Interstate Fair at Fargo, and a number of county fairs. Panels and charts were used extensively to illustrate the principal animal pests occurring in North Dakota and methods employed for their control. Distribution maps and mounted specimens also were used to advantage. One of the most attractive features proved to be the live animals which Mr. Zimmerman had on hand. Great numbers of people visited the place where these materials were on display, thus affording an excellent opportunity for presenting additional information of interest regarding the work which has been accomplished in that State. Many county agents urged that similar assistance be rendered in their counties, and a number of calls for demonstrations and campaigns have resulted.

## FOOD HABITS RESEARCH.

After spending a short time in Minnesota, getting the lake survey of that State under way, C. C. Sperry spent a few days in North Dakota investigating reports of two unusual forms of geese.

W. E. Manning, I. V. Shunk, and D. R. Hylan, employed temporarily during the summer months, are engaged in a survey of wild-fowl food resources. During July Messrs. Manning and Shunk continued the lake survey of Minnesota, a project which has been under way for two previous seasons. Mr. Hylan, after working for a short time in Minnesota, left for Lake Koshkonong, Wisconsin.

C. O. Handley is again in the laboratory for the summer months, engaged in examination of the stomach contents of fish-eating birds. E. R. Hall is also employed in similar work. It is hoped, with this additional assistance, that the bulletin on fish-eating birds which has been in the process of preparation for some time may be brought up to date.

## GAME AND BIRD RESERVATIONS.

The big-game fence which has been under construction for several years on the northern part of Niobrara Reservation, Nebraska, has been completed, and a temporary runway fence has been built for use in the transfer of animals across the Niobrara River. The game fence is 12 miles in length, 88 inches high, and incloses an area of approximately 4,000 acres. The animals will be greatly benefited by this change of pasture, since the two pastures of about 200 acres each in which they have been held are much too small for the 48 buffalo, 57 elk, and 2 deer now on the preserve. The animals will be transferred to the new pasture as soon as it is considered wise to take them over the river with their calves.

Lightning struck an old pine tree at the Bison Range on the afternoon of July 26, and the fire resulting made considerable progress by the time Warden Hodges could be notified. Mr. Hodges and the assistant warden, Bryan Nowlin, started out promptly with their fire-fighting equipment and made every effort to extinguish the fire. As it was located a mile or more from water, however, the best that could be done was to confine it to a small area and let it burn out. The danger was over by the night of the 27th.

The highest water in six years was reported at the Montana Bison Range this year. Some of the cultivated land near headquarters was flooded, and one mule deer fawn was drowned, having been washed into a flood gate and caught in the wire in a stream east of the headquarters.

There has been an unusually wet season at Wind Cave Preserve also, and the grass is reported to be knee-high in many places throughout the pasture.



Warden Ludwig Bethel, of Tortugas Keys Reservation, Fla., reports that there are approximately 45,000 birds at the refuge this year.

By order of the Acting Secretary of Agriculture, dated August 2, 1923, a portion of the southeastern part of Cold Springs Reservation, Oregon, has been opened to hunting of wild geese and ducks, subject to the laws of the State of Oregon. The portion on which hunting will be permitted is a fly-over known as the "draw", being the northwest quarter and the west half of the northeast quarter of Section 12, in Township 4 North, Range 29 East, Willamette Meridian. The hunting thus allowed will not seriously interfere with birds which during the open season rest on the water about one mile from the "draw", and yet will provide sportsmen with a reasonable amount of wild-fowl shooting in a section where heretofore they have had little opportunity to hunt.

#### IMPORTATIONS.

Foreign birds imported into the United States under permit from the Department during the month of July totaled 9,290, the greater number being entered at the port of New York.

Tracy I. Storer, of the Museum of Vertebrate Zoology, Berkeley, Calif., tendered his resignation as inspector of foreign birds and mammals at the port of San Francisco on July 7. Mr. Storer has held this position since March 1, 1919, and his resignation took effect July 31, 1923. H. S. Swarth, also of the Museum of Vertebrate Zoology, is being appointed in his place.

#### MIGRATORY BIRD TREATY AND LACEY ACTS.

Mr. Lawyer left Washington on August 2 for a brief official trip to New York City, and Portland and other points in New England.

George M. Riddick of Hornersville, Mo., has been transferred from the position of warden on Big Lake Reservation to fill the vacancy of U. S. game warden in Texas, caused by the resignation of George C. Shupee. Mr. Riddick's headquarters will be at Houston.

U. S. Game Warden Merrill left Erie, Pa., on July 17 in charge of the newly acquired motorboat Abeona, purchased in that city for use in patrol work on the Illinois River. Mr. Merrill reached Chicago on August 3 after a successful trip through Lakes Erie, Huron, and Michigan.

The following appointments were made to the position of U. S. deputy game warden:

James E. Thrasher, R. D. No. 2, Caruthersville, Mo.  
James W. Richardson, R. D. No. 4, Box A, Monroe, N. C.  
John B. Rowland, Port Wentworth, Ga.  
Elton Bowen, Wachapreague, Va.



Frank L. Bischof, Rock Port, Mo.  
James I. Tawse, 114 Wren St., Jackson, Mich.  
William Schull, St. John, N. Dak.  
George Dickinson, Minnewaukan, N. Dak.

Appointments of the following U. S. deputy game wardens were terminated:

Joseph C. Dean, R. D. No. 2, Nampa, Idaho.  
Walter L. Hare, Cornell, Calif.  
B. J. Monaghan, Upham, N. Dak.  
Otto M. Jones, 305 Bannock St., Boise, Idaho.

Migratory Bird Treaty Act Cases Terminated - Reports Received during July.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Birsch	1	North Carolina	Killing nongame birds	\$27
Hoffman	1	Mississippi	Selling ducks	\$25
"	2	Louisiana	Selling ducks	\$25 each
Hoffman and Holmes	2	Louisiana	Selling ducks	\$25 each
Holmes	2	Louisiana	Selling ducks	\$25 each

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Andersen	4	Iowa	Killing ducks in close season
"	5	"	Possessing ducks in close season
"	1	"	Capturing ducks in close season
Barmeier	1	Missouri	Possessing a duck in close season and killing a bittern
"	2	Illinois	Hunting ducks in close season
Kelsey	1	South Dakota	Selling ducks
Merrill and Scholler*	1	Illinois	Possessing ducks in storage in close season
Neal**Corbin** and Davis**	1	Indiana	Killing ducks in close season
Shaver	3	Minnesota	Possessing ducks in storage in close season

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Shaver and Gervais**	1	"	Hunting ducks in close season
Shaver and Fidler*	1	Illinois	Hunting ducks in close season
Shupee	1	Texas	Killing ducks in close season
Steele and Ransom	1	Washington	Offering to sell aigrettes
Tonkin	1	Oregon	Killing ducks in close season
Walker** and Randall**	2	Indiana	Killing ducks in close season
Whitehead	2	Georgia	Killing doves in close season
Whitehead and J. B. Rowland*	1	South Caro- lina	Killing wood ducks

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden





# THE SURVEY

Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.



Vol. 4.

Washington, D. C., September 19, 1923

No. 9

## GENERAL NOTES

Doctor Nelson left Washington on September 13 on a field investigational trip in States in the West and Southwest.

The following publication of the Bureau was received in August:

S. R. A. No. 55, "Migratory Bird Treaty, Act, and Regulations." Received August 6, 1923.

Among manuscripts submitted for outside publication in August were:

Ashbrook, Frank G., "The Relation of Fur Men to Their Organization," for the Fur Trade Review and the Central Furrier.

Day, Albert M., and S. H. Dadisman, "A Study of Wyoming Rodents for the Elementary Schools," as a bulletin of the College of Education of the University of Wyoming.

Hanson, Karl B., and H. L. Van Volkenberg, "Temperature, Pulse, and Respiration of Foxes," for the Journal of the American Veterinary Medical Association.

Nelson, E. W., "A Distributing Center for Migratory Wild Fowl," for Forest and Stream.

Walker, Ernest P., "Alaska's Wild Life Resource, Its Development and Utilization," for The Pathfinder of Alaska.

## BIOLOGICAL INVESTIGATIONS

E. A. Goldman has finished work in the mountain ranges of southeastern Arizona, having examined the Santa Catalinas, Chiricahuas, and other ranges west to and including the Baboquivari Range. He is now preparing for work in the Grand Canyon region and in a number of small detached areas which require clearing up.

F. C. Lincoln has recently returned from a bird-banding trip to the islands in the northern part of Lake Michigan. The work was carried on in cooperation with W. S. McCrea, of Chicago, Ill., who is one of the regular bird banding cooperators. Working from the town of St. James, on Beaver Island, all of the islands within 20 miles were visited. Important colonies of herring gulls were located at Hat Island, Mire Island, and Gull Hat Island, while a large colony of Caspian terns was discovered at Little Hat Island. Common terns were also breeding at the latter islet and a second colony of this species was located on what is known as "Stony Reef." As a result of the operations, about 750 young gulls and terns were banded.

Dr. H. C. Oberholser attended the sessions of the American School of Wild Life Protection and Propagation held at McGregor, Iowa, August 5 to 17. He reports a very interesting and instructive meeting. Following this he attended a conference on Nature Protection and Conservation at Boulder, Colo., August 20 to 23, where he made several addresses on conservation and bird protection. On his way east he made short stops at Lincoln, Nebr., Des Moines, Iowa, Chicago, Ill., and Cleveland, Ohio, in the interest of wild life conservation and study.

Dr. W. P. Taylor continued during August the preparation of his report on the birds and mammals of Washington, and in addition made a number of trips to points in the region about Tucson for the purpose of investigating jack rabbits and other injurious rodents.

T. H. Scheffer continued work along the same general lines followed by him in the State of Washington for some time - the study of life habits of injurious rodents and the collection of varying hares for stocking Alaskan islands.

#### ALASKA INVESTIGATIONS

The Sea Otter, which is used in patrol work in southeastern Alaska in connection with enforcing the Alaska fur law and regulations, and which has been undergoing extensive repairs and general overhauling at Seattle, Wash., for the past three months, has returned to Juneau, under command of Capt. K. C. Talmage. Ray C. Steele, U. S. Game Warden, of Portland, Ore., accompanied the boat northward as an assistant to the master.

The matter of appointing three new fur wardens has been taken up-- one for the Anchorage district, one for the Fairbanks district, and one for the Kuskokwim district. For the Anchorage district the appointment has been made of Allen H. Hardy, an old-time resident of that district and interested in the proper conservation of wild life. Mr. Hardy will assume his duties September 15, with headquarters at Anchorage.

New regulations for the protection of land fur-bearing animals in the Territory were approved by the Secretary on August 22, and became effective September 1. The most important change made was that of establishing a close season on beaver until November 17, 1924. A uniform season for trapping land fur animals in the Kodiak-Afognak Islands Group was made, and the season for trapping muskrats in districts 2 and 3 was changed to the period May 1 to June 10. A closed season on black, cinnamon, and glacier bears was prescribed for two months, July and August of each year, in District 1.

#### ECONOMIC INVESTIGATIONS

Doctor Fisher left Washington September 1 for an extended trip of inspection of field offices.

The sum of \$22,400 has been raised by the National Forest grazing associations in Idaho for cooperative predatory animal work for this fiscal year between the Biological Survey, the Forest Service, and grazing associations. The work is under the direction of L. J. Goldman, predatory animal inspector.

V. P. Deemer assumed charge of the predatory animal operations in Michigan August 21, succeeding J. S. Ligon, who will have charge of this work in New Mexico. Mr. Ligon is traveling by automobile from Michigan to New Mexico in order to investigate predatory animal conditions en route. He will spend a short time in Missouri conferring with Mr. Pope regarding the work to be initiated there.

E. B. Perkins and Paul Quick, field assistants in rodent work in Idaho, resigned August 31 after having completed the projects to which they were assigned.

Another illustration of the efficiency of our hunters is given in the prompt action and the results secured by S. M. Willis, of the Utah district. Mr. Willis found a deer and two fawns which had been killed by an old lion and two young ones. He immediately set some traps and studded the remainder of the deer carcass with small poisoned baits. The lion returned that night and was trapped. The young ones fed heartily from the studded carcass and a few days later one of these was found poisoned. As no sign of the other one has been seen it was evidently killed.

M. M. Smith, who was temporarily transferred to the position of clerk in the Albuquerque office, has returned to duty at San Antonio, Tex.

Louis Knowles, predatory animal inspector in charge of the South Dakota district, is planning an extensive poisoning campaign for the fall and winter on the Pine Ridge Indian Reservation. Two Federal hunters will be employed in this work.

Sage hens are reported very numerous in the North Park country near the Little Grizzly Creek, Colorado. Three years ago they were noted as particularly scarce in this region and without doubt much of the increase in this game bird is due to the effective coyote eradication in the North Park during the past two years.

James Silver and Carlyle Carr returned to Washington on September 1, after making field investigations of woodchuck and mole control methods at Chesapeake City and Big Pool, Md. Experiments were made in the use of calcium cyanide flakes in fumigating woodchuck burrows and of lye for the destruction of moles.

#### FOOD HABITS RESEARCH

C. C. Sperry has returned to Washington after having completed a survey of the wild-fowl food resources of Grassy Lake, Arkansas.



I. V. Shunk and D. R. Hylan, working under temporary appointment during the summer, have also returned after a successful two months spent in the continuation of the lake survey of Minnesota.

W. E. Manning is now in the Upper Peninsula of Michigan engaged in a survey of the lakes of that region in cooperation with the Upper Peninsula Development Bureau.

C. O. Handley has completed his summer's work in the laboratory and has returned to Washington and Lee University, where he will take a position as instructor in zoological studies.

Reports at present available indicate that Dr. F. P. Metcalf, formerly of this division, who with his wife was en route to China on board the steamship President Madison, was at Yokohama on August 30, two days before the earthquake. His friends will be glad to know that on September 1, the day of the disaster, the boat was reported safe at Kobe, 430 miles from Yokohama, and outside the danger zone.

#### GAME AND BIRD RESERVATIONS

Mr. Riley returned from the West on September 4 after an absence of two months in Oregon, Nevada, and Idaho in connection with game conservation matters, particularly with reference to the preservation of the antelope. He reports that the Governor of Nevada is very much interested in the protection of these animals and is taking the necessary steps to create effective refuges. These areas will be of very great value not only for the protection of antelope but also for the protection of sage hens, which have become greatly depleted over most of the areas of sagebrush lands in Nevada, Oregon, and Idaho.

L. L. Bryan, who has been acting as assistant warden at Big Lake Reservation, Ark., since July, 1918, is now in charge of the reservation in place of George M. Riddick, who has been appointed United States Game Warden, with headquarters at Houston, Tex.

Perry E. Wetmore, warden of the Tampa Bay Group of Refuges, Fla., has returned to duty after an absence of six weeks.

William Jenkin, Jr., warden at Chase Lake Refuge, N. Dak., writes that recent hailstorms have killed hundreds of grouse a few miles south of the reservation.

During the fiscal year just ended, 6,079 persons visited Sullys Hill Game Preserve, N. Dak.

Henry H. Plumb, engineer in the employ of the Reclamation Service, has been appointed warden at Minidoka Reservation, Idaho, to take the place of Geo. L. Hoffman, recently resigned.

The loss of two buffalo at Wind Cave Preserve, S. Dak., has been reported - a bull, 5 years old, and a cow, 7 years old.

It is reported that great cruelty is being practiced on the pelicans by certain persons at Pass-a-grille and St. Petersburg, Fla., which is in the vicinity of the Tampa Bay Bird Refuges. The warden has been directed to use every possible means to stop such cruelty, and the matter has been called to the attention of the president of the Florida Audubon Society. It is hoped that the joint efforts will result in protecting the birds from further torment.

#### IMPORTATIONS

The notable shipments of foreign birds and animals were received at the port of New York during the latter part of August: one, a small consignment of finches, weaver birds, and tanagers brought in by a private importer; and the other a large consignment of rare birds and mammals from Australia, including 4 kagus, 1 regent bower bird, 12 New Guinea pigeons, 58 dromedaries, and kangaroos of 11 different species.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Annual reports being received from more than 400 U. S. Deputy Game Wardens indicate that migratory birds continue to show a substantial increase in numbers in practically every section of the country. The need for the maintenance and perpetuation of suitable feeding, breeding, and nesting places for the birds is, however, becoming more apparent as the birds increase under protection and as drainage projects destroy their natural habitats.

Distribution is now being effected of the initial edition of 250,000 copies of the game law bulletin for the season 1923-24 (Farmers' Bulletin No. 1375). The new bulletin contains the several changes which have been promulgated in the migratory-bird treaty act regulations within the past year and the provisions of the Fordney-McCumber Tariff Act of 1922, affecting the importation of prohibited plumage, and also embraces changes which have taken place in the game laws of the several States and the Provinces of the Dominion of Canada.

Mr. Lawyer is now in the Western States on an extended official tour. He left the Washington office August 22.

The following appointments were made to the position of U. S. Deputy Game Warden during August:

Henry W. Walters, 1525 Liberty St., Jacksonville, Fla.  
Harold W. Becker, 208 "D" St. N.W., Washington, D. C.  
Almer C. Baxter, 942 So. 22d St., Columbus, Ohio.  
Theodore A. Berghoff, 1831 So. 20th St., St. Joseph, Mo.  
Allen H. Hardy, Anchorage, Alaska (Fur Warden and U. S.  
Deputy Game Warden).  
Francis M. Heirgood, R.D. No.1, Mica, Wash.

Appointments of the following U. S. Deputy Game Wardens were terminated during August:

Harry E. Battey, Putnam, Conn.

Oscar S. Briggs, Ortonville, Minn.

Dwight A. Beckwith, 721 14th St., Boone, Iowa.

The Bureau has just learned with regret of the unfortunate death of Robert N. Malkin, U. S. Deputy Game Warden, Louisville, Ky., who was struck on May 6 by an automobile truck and died on May 9 from the injuries received.

Migratory Bird Treaty Act Cases Terminated - Reports received during August.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Kenney*	1	Illinois	Selling ducks	\$25
Merrill	1	"	Interstate shipment of partridges in mismarked package	\$10 and costs
Merrill and Soderlund*	1	"	Attempting to kill a grebe	\$10
Merrill and Soderlund*	1	"	Killing a tern	\$10
Merrill and Scholler*	2	"	Possessing ducks in storage during close season	\$25 each
Perry and Dickerson**	13	Tennessee	Possessing ducks in storage during close season	\$15 each and costs
Tonkin	1	Oregon	Killing a swan	\$10

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

Cases Reported to Solicitor for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Andersen*	1	Iowa	Possessing ducks during close season
Barmeier and Thrasher*	1	Missouri	Killing a meadowlark
Bloxsom and Jester**	1	Virginia	Killing curlews
Bloxsom and Jester**	1	"	Killing herons
Brown*	1	North Dakota	Illegal interstate shipment of wild turkey eggs
Folck*	2	Iowa	Hunting ducks in close season
Hodgson**	2	Michigan	Possessing ducks in close season
Schwanebeck**	1	"	Possessing ducks in close season
Shaver	1	Minnesota	Hunting ducks after sunset
Whitehead and H.G. Rowland*	9	Georgia	Killing doves in close season

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden



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# THE SURVEY

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Washington, D. C., October 18, 1923

No. 10

## GENERAL NOTES

Mr. Henderson represented the Biological Survey at the Second Conference of the National Coast Anti-Pollution League, held at Atlantic City, N. J., October 1-3. The object of the League is to prevent by lawful means the pollution of navigable waters. The Biological Survey is interested in the project from its bearing upon the conservation of waterfowl.

The Biological Survey was represented at the Cambridge (Mass.) meeting of the American Ornithologists' Union, October 9-11, the members attending being Mr. Henderson, Dr. T. S. Palmer, W. L. McAtee, Dr. H. C. Oberholser, Dr. Alexander Wetmore, A. E. Howell, F. C. Lincoln, and Miss May T. Cooke.

The program included papers by the following members of the Survey: Dr. Palmer, "Looking Backward"; Mr. Howell, "The Everglade Kite in Florida"; Dr. Oberholser, "A Neglected Bird Paradise"; Mr. Lincoln, "The Migration of the Mallard" -- as shown by banding data; Dr. Wetmore, "The Affinities of Lawrencina nana," "Field Observations in the Hawaiian Bird Reservation," and "The Birds of Laysan" -- an exhibition of motion pictures made by Donald R. Dickey.

The new officers elected were as follows: Jonathan Dwight, president; and Dr. Wetmore and Joseph Grinnell, vice presidents. Dr. Palmer and Mr. McAtee were re-elected secretary and treasurer, respectively.

The sympathy of her many friends is extended to Miss Anna Montgomery, of the Accounts Office, in the death of her sister, Mrs. Collins, at Milford, Pa., on September 19.

The following publications of the Bureau were received in September:

- "Game Laws for the Season 1923-24," Farmers' Bulletin No. 1375, by George A. Lawyer and Frank L. Earnshaw. Received September 6.
- "Regulations for the Protection of Land Fur-bearing Animals in Alaska," S. R. A.--B. S. No. 56. Received September 11.
- "Hunting Migratory Game-Birds on Cold Springs Reservation, Oregon," S. R. A.--B. S. No. 57. Received September 21.
- "Some Common Birds Useful to the Farmer," Farmers' Bulletin No. 630. "Revised, May, 1923," received September 14.
- "Common Birds of Southeastern United States in Relation to Agriculture," Farmers' Bulletin No. 755. "Revised, June, 1923," received, September 14.

Among manuscripts submitted for outside publication in September were:

- Jewett, Stanley G., "Three Oregon Stragglers," for The Condor.  
Lincoln, Frederick C., "Banding Gulls in Lake Michigan," for the Wilson Bulletin.  
McAtee, W. L., "Notes on Cenchrea Westwood and Cedusa Fowler in America (Homoptera: Fulgoroidea), for Annals of the Entomological Society of America.  
Malloch, J. R., "A New Genus of Phoridae (Diptera)," for the Bulletin of the Brooklyn Entomological Society.  
-----"A Gynandromorph of Odynerus conformis Sauss. (Hymenoptera, Aculeata)," for Entomological News.  
-----"Three New Species of Apromyza and Synonymical Notes (Diptera, Apromyzidae)," for Entomological News.

### BIOLOGICAL INVESTIGATIONS

Dr. Alexander Wetmore returned to Washington on September 17 after completing a very successful natural history survey of the islands of the Hawaiian Bird Reservation. Wake Island also was visited. A large collection of birds and a few mammals was made on the various islands, including a series of the rare Hawaiian seal. It will be recalled that this expedition, which was conducted in cooperation with the Bishop Museum at Honolulu, was made possible through the courtesy of the Navy Department, which placed a vessel at the disposal of the party. It is planned to publish a report on the results of this work as soon as practicable.

Vernon Bailey is continuing his studies of the life habits of mammals in northern Michigan, specializing on the beaver. He has recently taken a number of fine animals, which are being used to start an experimental colony to demonstrate the feasibility of beaver-farming.

Dr. Walter P. Taylor represented the Survey at a meeting of the American Association for the Advancement of Science at Los Angeles, September 17 - 20, where he delivered papers on "The Present Status of the Bandtailed Pigeon on the Pacific Coast"; "The Conservation of Upland Game Birds of Washington"; and "The Relation of the Zuni Prairie Dog to Vegetation in Arizona".

T. H. Scheffer shipped 19 hares early in September to Sitka, Alaska, to Ernest P. Walker, chief fur warden of the Biological Survey, for planting on some suitable island in the region. During the remainder of the month he was occupied in studying the life habits of various injurious rodents, especially pocket gophers and pocket mice, and on further work in connection with securing hares for shipment to Alaska.

### ALASKA INVESTIGATIONS

Jack W. Warwick, of Nome, has been appointed fur warden with headquarters at Flat, effective October 1. Mr. Warwick is a pioneer citizen of northwestern Alaska, and well fitted for duty in the Kuskokwim region, one



of the most important sections of the Territory for land fur-bearing animals, particularly beavers.

Frank Dufresne, fur warden, of Nome, will soon leave his headquarters for an inspection trip up the Yukon River to look after the observance of the close season on beaver. Reports indicate that there is general approval of the new regulation establishing the close season on beaver.

Ernest P. Walker, chief fur warden, has submitted a report with recommendations on the subject of moose conditions on the Kenai Peninsula. His report confirms the opinion of former Fur Warden Culver that moose on the west side of the peninsula are threatened with starvation unless steps shall be taken early the coming winter to provide food for them.

Olaus J. Murie, assistant biologist with headquarters at Fairbanks, will come to Washington this winter to prepare a report on his three years' investigations of caribou.

#### ECONOMIC INVESTIGATIONS

Approximately 62,867 acres in New Mexico were treated during August for the control of destructive rodents. The work was done under the direction of A. E. Gray, by the Biological Survey and cooperating State forces. In the Black Lake district 252 dead prairie dogs were found in a 3-acre tract which was treated. As the white-tailed prairie dog is very difficult to poison this is considered to be an excellent showing.

George Kerr, clerk in the Idaho district, resigned September 30 to enter business.

At the 20th annual meeting of the Wyoming Woolgrowers Association at Rawlins the predatory animal work of this Bureau was heartily endorsed and was so mentioned in the resolutions adopted.

Thirty purebred Rhode Island chickens were reported killed on a ranch near Texas Creek, Colo., by a lone bobcat, between August 1 and 13. Hunter Dave Crouch went to the ranch with his lion dogs and on August 16 succeeded in putting this bobcat up a tree and killed it.

D. A. Gilchrist reports that several pure white prairie dogs with pink eyes which were captured near Prescott, Ariz., have been mounted in an interesting group and are on display at the Phoenix office. They will be used at exhibits this fall.

Miss Frances E. Voight resigned as clerk in the Denver laboratory to accept a position with the State of New Mexico at Albuquerque. Miss Helen L. Jones, of Denver, was appointed to fill the vacancy.

L. J. Goldman, of the Idaho district, reports: "Stockmen throughout the country state that their losses from depredations by predatory animals were less this year wherever poison campaigns were staged than at any time



since they were engaged in the sheep business. They say they can tell at once the difference when they trail their sheep outside the poisoned areas. The consensus of opinion is that the results of poisoning operations have exceeded all expectations, and not once has liberal cooperation been refused. The urgent need now is for some one to invent a bait-making machine. This job has assumed staggering proportions."

W. E. Crouch, of the Idaho district, spent the greater part of August on leave in Sacramento, due to the serious illness of Mrs. Crouch in that city. Both have now returned to Boise, and we are glad to report that Mrs. Crouch has practically recovered.

Late in July, M. E. Musgrave, of the Arizona district, received a report from stockmen in the Chiricahua Mountains to the effect that coyotes and wolves were attacking their cattle. W. A. Knibbe was sent to the district and found that a half-breed wolf and a large number of eagles were doing most of the damage. Eagles are exceptionally numerous in these mountains and do so much damage that it has been necessary to destroy a certain number yearly in order to cut down the loss in livestock and game. Mr. Knibbe caught a few coyotes and reports that there are few, if any, left on the range. He also caught the half-breed wolf and destroyed 17 eagles.

A heavy infestation of ground squirrels was eliminated in Calaveras County, near Westpoint, Calif., under the direction of L. L. Laythe. The dead squirrels could be counted by the hundreds, and the adjoining land-owners were very well pleased.

A very interesting collection of live rodent specimens for exhibition at fairs is being made under the direction of B. J. Melton, of the Oklahoma-Arkansas district. An exhibit of skulls of rodents and other mammals is also being arranged in an attempt to point out the differences between them.

No predatory animal work was done in Kansas during August, but a communication received from a rancher in the Ludell section of Rawlins County, where coyote depredations were probably most severe, gives further evidence of the decreased loss in poultry, young pigs, and calves as the result of the four months' campaigns against coyotes.

Joseph Keyes, of the Colorado district, reports that many sloping hillsides in Douglas County, the original home of thousands of black-tails, are now vacated, but the old chimneys of the prairie dogs are still visible. Swarms of bees were discovered going in and out of these chimneys, and the buzz below in the enlarged cavities gave every reason to believe that honey was being stored there.

A. E. Gray assisted B. J. Melton with a rat-control campaign in Little Rock, Ark., during the latter part of August and the first of September. Three thousand pounds of cereal, vegetable, and meat baits were prepared, using barium carbonate, and very satisfactory results were obtained.

An extensive display of moleskins was shown in the window of a leading manufacturing furrier in Seattle recently under the direction of L. K. Couch

of the Washington district. The exhibit included mounted moles of two species, 200 raw skins, 50 dressed skins, arrangement of skins to show the months in which they were prime, two efficient mole traps, a demonstration piece of 50 skins cut and sewed similar to a garment, and a moleskin wrap on a wax model. A check of the crowds at the window indicated that the display was viewed by about 50,000 people. The purpose of the display was to create a desire for the western moleskins and to interest furriers in placing the Townsend mole in a class separate from the imported Scotch mole. A demand for the native moleskins would arouse interest in trapping, thus reducing the numbers of the animal where it is a pest.

In response to a request from the executive officer at Walter Reed Hospital, an investigation was made by James Silver during September with a view to ridding the hospital grounds and buildings of rats. A thorough poisoning campaign was recommended, to be followed by additional treatments as conditions warrant, and assistance in the work promised. It is not anticipated that the problem of rat control will be a difficult one because of the clean and orderly condition of the premises.

The effectiveness of the poisoning campaign against predatory animals conducted in Hemphill County, Tex., under the direction of O. L. Coleman was heartily indorsed. Several ranchers interviewed reported only one coyote where there were twenty last year.

For putting a little kick in the poisoning campaigns in the work of exterminating predatory animals, it might be mentioned that the mule has been found useful. A supposedly rabid coyote bit a young man at Greenwood, N. Mex., recently but used indiscretion in his next selection, a mule. A suitable epitaph for the coyote is in demand.

P. C. Petersen, a hunter of the Washington district, captured a grizzly bear in August, which means a great saving in the livestock ranging the Okanogan National Forest. The depredations of the animal for this year are placed at \$3,000.

S. R. Dunham, a hunter of the Utah district, was granted 30 days' leave without pay, beginning August 19, to assist the superintendent of the Brooklyn Museum in collecting specimens of mountain lions and other animals from Utah to be mounted and put on exhibition.

The new experimental fur farm of the Bureau will be located in Greenfield Township, Saratoga County, N. Y. This farm consists of about 20 acres of well-drained and wooded land and contains a farmhouse which is being renovated to be used as a residence for the superintendent of the farm and his family. Present plans call for a series of modern pens to accommodate foxes, martens, and skunks. F. G. Ashbrook, who is in charge of the work, reports that the animals and equipment will be moved about October 15 from Keeseville to the new farm.

Carlyle Carr returned to Washington, October 6, from a trip through West Virginia, Indiana, and Illinois, where he has been demonstrating the control of field mice and woodchucks. Pine mouse injury was found most prevalent in West Virginia. In one of the orchards visited, 4,000 of 9,000 apple trees



had been girdled by these mice. Woodchucks in Indiana and Illinois have increased greatly during recent years. The farmers were found eager to participate in campaigns to destroy them.

James Silver will leave October 15 for Miami, Fla., to demonstrate the control of land crabs in southern Florida. A great deal of interest in methods of control has been manifested by truck gardeners who have experienced severe losses to crops grown in the small glades and along the coast.

Predatory animal control work was inaugurated in the State of Missouri during August under direction of E. F. Pope, predatory animal inspector in charge of the Oklahoma-Arkansas-Missouri District. The stock raisers of Missouri have suffered great losses from timber wolves and coyotes, and the State Legislature appropriated \$15,000 at its last session for cooperation with the Biological Survey in the control of these animals.

#### GAME AND BIRD RESERVATIONS

An additional half-mile of fence, taking in 20 acres of land and 175 feet of water-front on Sabine Creek, has been completed at the Montana Bison Range. A reservoir 135 feet by 35 feet and a small barn at the assistant warden's quarters have also been constructed. A buffalo bull was found dead recently by an employee who was patrolling this reservation.

Paul Kroegel, warden of the Pelican Island Reservation, Florida, reports that several hundred birds have returned to that refuge. They have not yet located but are roosting around on the different islands.

The harvesting of the hay crop, which amounted to 78<sup>4</sup> tons, was completed at the Wyoming Elk Refuge on September 4. Arrangements are being made for the purchase of additional hay and also pasture rights, in order that sufficient feed may be available for the elk during the coming winter.

The elk at Niobrara Reservation, Nebr., with the exception of six bulls, have been taken across the Niobrara River into the new pasture. So far it has not been possible to get the buffalo over the river but it is believed that this can soon be accomplished. F. M. Dille reports many visitors at Niobrara Reservation during the week of the County Fair at Valentine.

The herd of antelope at Wind Cave Preserve, South Dakota, which was reduced to eight does because of depredations by predatory animals, has now increased to 17.

#### IMPORTATIONS

Among the interesting birds imported during the month of September was a kiwi (*Apteryx mantelli*), shipped from New Zealand for the National Zoological Park at Washington. The apteryx, which is confined to New Zealand and is approaching extinction, is rarely imported into the United States. The present specimen is the first that has been on exhibition in the National Zoological Park for 15 years. The last shipment was made in January, 1906, and one of the birds lived for two years.



## MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer attended the annual meeting of the Western Association of State Game Commissioners, at Missoula, Mont., September 10 and 11. The meeting was well attended and among the resolutions adopted was one endorsing the Migratory Bird Refuge--Public Shooting-Ground Bill, with the exception of the provision which permits persons to hunt on their own lands without obtaining a Federal license.

Following the Missoula meeting Mr. Lawyer proceeded to Billings, Mont., in connection with official work, and thence to St. Louis, Missouri, where on September 20 he attended the annual meeting of the International Association of Game, Fish, and Conservation Commissioners. This Association passed among others resolutions unanimously favoring the enactment of the Migratory-Bird Refuge--Public Shooting-Ground Bill, and protesting against the drainage of the Mississippi River Bottoms and unwise drainage generally. There was a good attendance at the St. Louis meeting, and a number of important and interesting papers were read.

Mr. Lawyer and W. Roy Dillon, of the Washington office, attended a conference, held in St. Louis on September 20 and 21, of United States game wardens stationed in the Mississippi Valley. The thirteen wardens present were given personal instructions on various matters arising from time to time in connection with their work, and it is felt that the results of the conference were very beneficial. All left it with renewed enthusiasm to continue their work at the maximum of efficiency. United States game wardens in attendance were Messrs. Barmeler, Merrill, Shaver, Visart, Hoffman, Kelsey, Linebaugh, Charlton, Steel (Orin D.), Perry, Riddick, Andersen, and Holmes.

The following appointments were made to the position of U. S. deputy game warden during September:

Charles M. Conger, Conconully Bird Reservation, Conconully, Wash.  
John D. Krowl, Bay Shore, N. Y.  
Charles M. Letters, 4 Charles St., Putnam, Conn.  
Melville D. Church, 2012 "O" St., N.W., Washington, D. C.  
Jack W. Warwick (Fur warden and U. S. deputy game warden) Flat, Alaska.  
Edward B. Moody, c/o County Jail, Montgomery, Ala.  
William E. Dickerson, 765 Crockett Place, Memphis, Tenn.  
Harry E. Maghee, R. D. No. 2, Augusta, Ga.  
Joe Mestel, 132 Lincoln St., Collinsville, Ill.

Appointments of the following U. S. deputy game wardens were terminated during September:

Clare E. Saunders, Roseau, Minn.  
Morven R. Fakes, Carbondale, Ill.  
Harry A. Fidler, R. D. No. 5, Canton, Ill.

Migratory Bird Treaty Act Cases Terminated - Reports received during September

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Barmeier	1	Illinois	Illegal interstate shipment of ducks	\$5 and costs of \$11.60
"	2	"	Killing flickers	\$5 and costs of \$5.83 each
"	2	"	Killing coot from powerboat	\$5 and costs of \$11.54 each
"	1	"	Hunting ducks after sunset	\$5 and costs of \$18.66
"	1	Missouri	Selling a goose	\$5
Barmeier and Heller*	1	"	Selling ducks	\$30
Charlton and Srofe**	2	Ohio	Killing ducks from powerboat	\$25 and costs of \$18.20 each
"	1	"	Killing ducks from powerboat	\$25 and costs of \$11.65
Friel***	1	Nevada	Killing doves in close season	\$25
Heller*	3	Missouri	Killing ducks from powerboat	\$25 and costs of \$13.45 each
Merrill and Scholler*	1	Illinois	Possessing ducks in storage in close season	\$25
Mushbach	1	Montana	Hunting ducks after sunset	\$1
"	1	"	Hunting ducks after sunset	\$5 and costs of \$25.99
"	2	"	Killing gulls	\$10 and costs of \$14.25 each
Visart	3	Arkansas	Killing little blue herons	\$5 each

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Cooperator

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier	2	Illinois	Killing flickers
Friel***	1	Nevada	Killing doves in close season
Linebaugh and Lynn**	3	Tennessee	Killing doves in close season
Shaver and Gervais**	3	Minnesota	Killing killdeer
Visart	3	Arkansas	Killing little blue herons
Whitehead	1	Georgia	Killing a woodpecker
Whitehead and H.G. Rowland*	10	"	Killing doves in close season
Whitehead and Thompson**	1	Florida	Killing a great blue heron

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Cooperator

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Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.

Vol. 4

Washington, D. C., November 15, 1923

No. 11

## GENERAL NOTES

Doctor Nelson has about concluded his field investigation trip through the West and Southwest, and after making a few stops enroute is expected to arrive in Washington, D. C., soon after the middle of November.

The following publication of the Bureau was issued in October:

"Local Names of Migratory Game Birds," by W. L. McAtee; Miscellaneous Circular No. 13. Received November 2.

Among manuscripts submitted for outside publication in October were:

- Jewett, Stanley G., "An Intelligent Northwestern Crow (Corvus caurinus)," for the Condor.
- Kellogg, Remington, "On the Occurrence of Remains of Fossil Porpoises of the Genus Eurhinodelphis in North America," for Proceedings of the United States National Museum.
- Lincoln, Frederick C., "The Ducks of the Illinois River Marshes," for Bulletin of the Illinois Audubon Society.
- Murie, Olaus J., "Trailing the Caribou Herds," for American Forestry.
- Oberholser, Harry C., "August and September Birds at Washington, D. C.," and "The Migration of North American Birds, XXIII," for Bird Lore.
- Taylor, W. P., "The Present Status of the Band-Tailed Pigeon on the Pacific Coast," for California Fish and Game.
- "Upland Game Birds in the State of Washington," for The Condor.

Carter T. Bradford has been temporarily appointed as messenger to assist during absences on the regular messenger force.

## BIOLOGICAL INVESTIGATIONS

Mr. Goldman, after completing field work in Arizona, made a trip to Puyallup, Wash., where he conferred with T. H. Scheffer regarding the various phases of work now being carried on in that section. After taking a few days' vacation in southern California, he will return to Washington, D. C.

Vernon Bailey returned on October 23 from northern Michigan, where he has been capturing beavers and placing them in fenced inclosures to be kept and cared for in semi-domestication until several important problems in beaver culture shall have been satisfactorily settled. Some of these problems are dates and rate of breeding, kinds and quantity of food needed, sociability and domestic preferences, numbers that can be successfully raised on given areas of swimming and feeding spaces, and kinds of fencing required. At first



much trouble was experienced in holding the beavers. They tore their way out by breaking the wires, or prying the jaws of the trap apart. Many improvements in the traps were made, and at last they held even old and powerful animals. The last one caught and landed in the beaver corral weighed 49 pounds. Fourteen beavers were captured, and of these two colonies of four each were finally established. These colonies are being cared for under direction of the Biological Survey, but two or three years will necessarily elapse before definite conclusions can be reached and recommendations made.

F. C. Lincoln attended the annual meeting of the Inland Bird Banding Association, at Indianapolis, Ind., on November 2 and 3. This organization, which was formed at the Chicago meeting of the American Ornithologists' Union in 1922, has had a most satisfactory growth during the past year, and the support which it has received is indicative of the interest which the bird-banding work has aroused. The meeting was held in Indianapolis at the joint invitation of the Indiana Audubon Society and the Nature Study Club of Indiana. The speakers included, in addition to Mr. Lincoln, the presidents of these organizations, the Commissioner of Conservation of Indiana, the president, secretary, and treasurer of the Inland Association, and others. On his return trip Mr. Lincoln stopped at Cleveland to confer with persons interested in the development of the bird-banding work.

#### ALASKA INVESTIGATIONS

For trapping beaver out of season, a fisherman in the Copper River Flats section was recently fined \$200 and costs.

Fur Warden Jack W. Warwick has purchased a dog team at Nome, preparatory to leaving for his headquarters at Flat, in the Kuskokwim region. The dog team will be used in patrol work.

Chief Fur Warden E. P. Walker, of Juneau, has been authorized to arrange for the capture of rabbits on the Kenai Peninsula for transfer to islands in southeastern Alaska for restocking purposes.

Fur Warden A. H. Hardy, of Anchorage, who recently made an inspection trip to the Kenai Peninsula in the Kasilof River section, confirms reports that many moose calves and quite a number of adult animals perished for lack of food last winter. Hunters and trappers informed him that they had seen skeletons of the animals.

#### ECONOMIC INVESTIGATIONS

Raw western moleskins have now for the first time been placed by the fur trade in a separate class from the imported Dutch and Scotch moles, the Fouke Fur Company, of St. Louis, having quoted a price of 20 cents for the large and 15 cents for the medium sized Townsend moles, and 5 cents for the coast moles.

Herbert R. Wells, in charge of rodent work in South Dakota, recently sent a black-footed ferret to the National Zoological Park at Washington, D. C. This makes an interesting and valuable addition to the exhibit material.

It was captured by Dana Stearns, foreman of the crew working on the Pine Ridge Indian Reservation. A black footed ferret was also secured by B. J. Eaton for use in his exhibit work. Ferrets are very scarce in Oklahoma and this one was captured by Wm. E. Baker, County Agent of Cimarron County, and his son. Plans were made to ship it also to the National Zoological Park when it died unexpectedly. It has therefore been added to the Biological Survey collection.

H. P. Williams left Seattle October 4 for Alaska to spend several months demonstrating the control of wolves. He is now in Alaska and has started field operations.

Roy Moore, of the Montana district, was transferred to Kansas October 2 to assist Mr. Oman for several months. The season's campaign on the Black-foot Indian Reservation, Browning, Mont., which has been under Mr. Moore's supervision, ended September 14, as the squirrels had gone in for the winter.

Elmer Williams, of the Oregon district, recently trapped a large coyote and bobcat that had been eating deer on Skeleton Mountain.

J. S. Ligon arrived in Albuquerque September 10 and assumed charge of the predatory animal work of the New Mexico district September 20, relieving E. L. Pineau, who has been temporarily in charge since July 1. Mr. Ligon made the trip from Michigan to New Mexico by automobile so that he might investigate predatory animal conditions en route. The latter part of August was spent with E. F. Pope studying conditions in Missouri and formulating plans for the predatory animal work which is being organized there. Wolves are very numerous and in many localities have made sheep-raising impracticable. Hunters have been assigned to several counties and an active campaign against predatory animals is now on under the direction of Mr. Pope.

A. M. Day, with the assistance of county agents, is making a survey of rat conditions in Wyoming. These rodents were first noticed there about four years ago and campaigns are now being planned to destroy them before the infestation increases.

A very effective piece of rodent work is being carried on in South Dakota on the Pine Ridge Indian Reservation, and an excellent demonstration was made on the Rosebud Reservation under the direction of H. R. Wells, in cooperation with the Indian Service. Unusually good kills have been made on the areas treated and a continuation of the work is planned in the spring.

The headquarters of the predatory animal work of the Idaho district were transferred from Boise to Gooding, October 17.

B. B. Richards spent September 6 in Denver conferring with Joseph Keyes regarding rodent work and making plans for cooperative work along the southwestern boundary of Utah.

Alfred Andrews, a hunter of the Oregon district, made an enviable record in taking 75 coyotes and 13 bobcats during September, the skin or scalp of each being saved. This is the highest number for this fiscal year

and is among the high records made since the beginning of the work.

Hunters holding records for capturing 30 or more animals in any one month since the beginning of the work are as follows:

Total	Hunter	State	Fiscal Year	Bobcats	Coyotes
115	:E. L. Homan	:Texas	: 1923	: ---	: 115
114	:Joe Smith	:Texas	: 1921	: 10	: 104
100	:Joe Smith	:Texas	: 1921	: 14	: 86
83	:A. Andrews	:Oregon	: 1924	: 13	: 75
83	:W. B. Peoples	:Texas	: 1921	: 6	: 82
87	:Ray Williams	:Idaho	: 1918	: 2	: 85
81	:H. R. Ahalt	:Oregon	: 1923	: 5	: 76
80	:W. C. Snyder	:Oregon	: 1923	: 10	: 70
:	:	:	:	:	:

During September exhibits were made by the Division of Economic Investigations at fairs held at the following places: Hotchkiss, Montrose, and Pueblo, Colo.; Spokane and Yakima, Wash.; Sacramento and Fresno, Calif.; Fallon, Nev.; Salem, Oreg.; Amarillo, Tex.; Raton and Santa Fe, N. Mex.; Dickinson, N. Dak.; El Reno and Chickasha, Okla.; and Douglas, Wyo.

A hawk and an owl skin, placed on a panel with a placard "Protect Hawks and Owls, They Destroy Thousands of Harmful Rodents Annually," aroused much interest and discussion at the Wyoming State Fair at Douglas.

A large prairie dog mound, with 4 young and 2 adult mounted specimens, in a natural setting of sagebrush, grasses, and cactus, was used at the Delta County and Western Slope Fairs, Colorado, to emphasize the proper placing of poisoned grain.

A collection of live animals consisting of 1 prairie dog, 1 pack rat, 1 cotton rat, 1 bull snake, 2 13-lined ground squirrels, 2 deer mice, 1 pocket gopher, and 1 black-footed ferret attracted much interest at the Canadian and Grady County Fairs, Oklahoma.

The Biological Survey representative at the booth at the Stark County Fair, North Dakota, in three days gave desired information on the control of various rodents to 6,000 persons.

An exhibit of specimens of various kinds of ground squirrels and pocket gophers together with suitable traps enabled visitors at the State Fair at Fallon, Nev., to identify their pests and secure information as to how to destroy them.

One outstanding indorsement of the Bureau's work which was brought to the notice of our representatives at the Amarillo Tri-State Exposition, Texas, was that when discussing the work with interested inquirers some by-



stander would always speak up to tell of the effective results obtained on his range from control work conducted in cooperation with Bureau workers.

A six months' furlough beginning September 26 was granted G. C. Oderkirk of the North Dakota district so that he may continue his studies at the Agricultural College at Fargo.

A notorious sheep-killing bear was killed by Hunter Dearth, of the Wyoming district, September 7. This bear had been preying on a band of sheep in the Wyoming National Forest during the past summer and never failed to kill at least one sheep, and sometimes several, at each visit.

Edward Rasmussen of the Utah district assisted George Shiras 3d, for several days in taking flashlight pictures of deer in the Kaibab Forest.

Hunter Meili, of the South Dakota district, who had been working on the Cheyenne Indian Reservation just sixteen months at the end of September, took in that time 166 coyotes and 8 wolves besides poisoning over a large area. This work was of direct benefit not only to the Reservation but also to the farming section of the State lying across the Missouri River to the east. This reservation is a large one and is one of the worst coyote-infested districts of the State.

Poisoned baits amounting to 6,300 pounds were prepared in Okanogan County, Washington, and distributed to orchardists at cost, to control orchard mice. Excellent results were obtained from this work, which was under the direction of L. K. Couch.

C. R. Landon, in charge of predatory animal work in Texas, reports that during September Hunter R. H. Blaylock caught a particularly notorious red wolf which had been depredating on the ranchers of McCullough County for the past two years. He also succeeded in getting the wolf's mate and the pups. This wolf family has destroyed by actual count since March of this year sheep and goats to the value of over \$1,000, figuring sheep at \$5 and goats at \$2 per head.

Hunter H. S. Lindley, of the Texas district, also caught a lone sheep-killing red wolf on the Callan ranch in Menard County as a result of four days' work.

E. R. Sans, of the Nevada district, reports that private stockmen who used our poison last season are requesting additional supplies this year and are reporting their recent successes. The Utah Construction Company, which ranges a great deal in Nevada territory, in northeastern Elko County, reported it had actually taken 125 coyotes by poison furnished through this office last winter and was reasonably sure that large numbers were killed which were never found, as during the lambing season last spring less trouble was experienced than ever before on the lambing range.

O. E. Royal, a hunter of the New Mexico District, accomplished an excellent piece of work in taking 4 wolves, 2 males and 2 females, on the

Jicarilla Indian Reservation in a period of two months. It is thought that these wolves are the last of the pack.

L. Inman, also a hunter of the New Mexico district, secured a famous old renegade wolf while working the Black Range during September.

Inspector M. E. Musgrave and Assistant Inspector Pickrell, of the Arizona district, are planning a coyote-poisoning campaign on the Navajo Indian Reservation the coming winter.

Joseph Keyes, of the Colorado District, reports that during demonstrations in the control of rats about Denver, 25 rats were taken in the course of two weeks in one small building in the back yard of a prominent residence. In another instance a mother rat and her nine young were taken in a trap adjacent to a sitting pigeon, whose eggs were being stolen each night.

During September, 17,275 acres of land infested with rodents were treated in Arizona, after which 408 prairie dogs were picked up by Isaac Rogers, a cooperative employe, from 100 acres in Gila County. This completes the extermination of prairie dogs from Gila County, which can now be added to Cochise and Graham Counties, which were cleared of prairie dogs last year.

Otto Steph1, Junior Biologist in charge of rodent work in Montana, reports that apparently there are no house rats in that State. How all the rat-infested States must envy Montana!

#### FOOD HABITS RESEARCH

Mr. McAtee made a trip to Jacksonville, Fla., in October, to direct the transportation of 42 chachalacas and 7 curassows from that point to Sapelo Island, Georgia, where the birds were released. These birds constituted the bulk of an order placed with W. A. King, of San Antonio, Tex., and brought by him to Jacksonville, where he was joined by Mr. McAtee. After arrival at Sapelo Island, Mr. McAtee made a survey of bird food resources for game birds of the island. Both the chachalacas and curassows came through in good condition. The former, especially, were very tame.

The Division of Food Habits Research has been compelled to move its offices from Wing 1 of Tempo Building F to the third floor of Wing 3 of the same building, in compliance with a decision of the Public Buildings Commission which has allocated the quarters formerly occupied by this Division to a unit of the Treasury Department.

#### GAME AND BIRD PRESERVATIONS

Mr. Riley started on October 27 on an official trip to the West. He is now at the National Bison Range and will visit the Elk Refuge, Wind Cave Preserve, and Niobrara Reservation before he returns to Washington.

Andrew R. Hodges, who has served as Warden of the National Bison Range ever since its establishment in 1909, has resigned, his resignation



becoming effective at the termination of October 31. Mr. Hodges has the best wishes of the Bureau for his future welfare and prosperity. He will be succeeded by Frank H. Rose, who for several years has been a grazing examiner in the Office of the District Forester at Denver, Colo.

The buffalo at the Niobrara Reservation have now been transferred to the large pasture inclosed by the new game fence, on the north side of the river. The elk were transferred to this pasture several weeks ago and are reported to be much improved by the change.

B. J. Pacetti, Warden of the Mosquito Inlet Reservation, Fla., states that more birds have been on the refuge recently than he has seen there in many years. He reports a very large flight of teal and of shorebirds, especially yellowlegs and brown curlews. A severe storm occurred the latter part of September but it did no injury to the birds.

The State Game and Fish Commission of North Dakota has presented a Canada goose and 6 pairs of Chinese pheasants to the Sullys Hill Game Preserve. The pheasants are being kept in a pen, where they will be fed until spring, when most of them will be released among the 49 other pheasants already in and around the preserve. A pair of mallards also has been obtained recently and many ducks and geese are stopping on Sweetwater Lake within the preserve.

#### IMPORTATIONS

Permits were issued for the importation of 1,602 foxes from Canada during the month of October. This is almost double the number imported during the corresponding month in 1922.

A rare species of parrot seldom imported into the United States, known as the Levaillant parrot (Poicephalus gularis), was brought in at the port of New York in a shipment from Hamburg, Germany, on October 26.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

Mr. Lawyer visited New York City on October 23 in connection with matters relating to the administration of the Migratory Bird Treaty Act and Regulations.

The Migratory Bird Treaty Act Division and the Division of Economic Investigations were represented by an exhibit at the Conservation Pageant held in Baltimore the week of October 29-November 3. Mr. Denmead, Deputy Chief Warden, was in charge of the Bureau material. Department motion pictures relating to bird life were also exhibited each day. The pageant was well attended and great interest was manifested in the Bureau's booth. Circulars and publications of the Bureau, including the current game laws, were distributed.

U. S. Game Warden Orin D. Steele, in his report for October 13, says: "At Big Lake (Iowa) at 5:10 a.m. to 8:00 a.m., I saw more birds than I ever



thought existed. I sat on the railroad tracks and they passed over me in one continual stream. Some passed me by a few feet only. At 6:00 a.m. it was quite light and I found most of these birds were coots, though many teals were mixed with them. No less than 200 hunters were gathered around the lake and each was firing as fast as he could re-load."

Warden Whitehead had a banner day in Federal court at Macon, Ga., on October 10, when 24 cases obtained by him and Deputies Cannon and H. G. Rowland were terminated by fines amounting in the aggregate to \$360. All of the violations involved the killing of mourning doves in the close season.

Hunting ducks from an airplane apparently continues, to some extent, despite the fact that it is now generally known that this method of hunting wild fowl is in violation of the Treaty Act and Regulations. Two persons engaged in this means of hunting were recently apprehended in the State of Washington. Criminal informations have been filed against them and it is probable that the cases will be tried at an early date.

On October 8 in the Federal court at Cape Girardeau, Mo., 14 cases obtained by Warden Barmeier, 9 of which he was assisted by Deputy Heller, 2 by Deputy Thrasher; and 2 by Warden Kelsey, were terminated by fines totaling \$450. Two cases obtained by Warden Riddick were also disposed of on the same date at Cape Girardeau by fines of \$50 each. Most of these offenses were for killing ducks in the close season.

The report of Warden Kelsey, of Watertown, S. Dak., for the week ending October 13, calls attention to a peculiar condition of waterfowl flight in that section this fall. Mr. Kelsey says that "While northern ducks have failed to put in an appearance up to date, Hutchins, Snow, and Canada geese have been moving for some time. It is unusual to have the geese precede the ducks as it generally takes considerable snappy cold to start the latter."

A few more fines similar to the ones assessed in the Federal court at Council Bluffs, Iowa, will go far toward convincing persons prone to violate the Migratory Bird Treaty Act that it is much cheaper to obey the law. On October 30 three persons charged with killing wild ducks in March entered pleas of guilty and the judge assessed a fine of \$100 and costs in each case. The cases were obtained by Warden John Q. Holmes, assisted by State Deputy S. V. Cooney.

The following appointments were made to the position of U. S. Deputy Game Warden during October:

J. Ross Logan, R. D. No. 5, Canton, Ill.  
Henry Fox, Mercer University, Macon, Ga.  
Walto L. Denalsano, Ceylon St., Eagle Pass, Tex.  
Kenneth F. Roahen, Wenatchee, Wash.  
Henry Stein, 4516 St. Claude Ave., New Orleans, La.  
DeWitt H. Clark, 216 Walnut St., New Orleans, La.  
Erland C. Torrey, Dixfield, Maine.  
John T. Chism, Friars Point, Miss.

Archa B. Monroe, 8004 South Green St., Chicago, Ill.  
 Arba H. Bridges, 4014 Wentworth Ave., S., Minneapolis, Minn.  
 S. Carl Hubbard, 3 South Union St., Bay Shore, N. Y.  
 James H. Graves, Vienna, Va.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of October:

William O. Smith, Poughkeepsie, Ark.  
 Claude D. MacGary, P. O. Box 43, Hammond, Ind.  
 Walter Hoemig, 1649 Cass St., Fort Wayne, Ind.  
 George E. Hathorne, 70 Main St., Bangor, Maine.  
 George H. Chaffee, Middlebury, Vt.  
 Victor L. Hurlburt, Grande Isle, Vt.  
 James F. Bugbee, Lyme, Conn.  
 John D. Young, Phenix, R. I.  
 James J. Moorehead, Phenix, R. I.  
 Eugene D. Mosher, 406 E. Arch St., Marquette, Mich.  
 James F. McMahon, Box 94, Baraga, Mich.  
 Martin Sharp, 1422 Summit St., Little Rock, Ark.  
 Meriwether Donaldson, R. D. No. 6, Paragould, Ark.

Albert E. Classon, 396 Water St., Ellsworth, Maine, resigned as U. S. deputy game warden, effective September 30.

Migratory Bird Treaty Act Cases Terminated - Reports received during October.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Andersen*	1	Iowa	Capturing ducks without permit	\$1 and costs of \$24.66
Barmeier	1	Missouri	Selling geese	\$40
Barmeier and Heller*	9	"	Killing ducks in close season	\$25 each
Barmeier and Thrasher*	1	"	Killing a meadowlark	\$10
Barmeier and Thrasher*	1	"	Possessing ducks in close season	\$75
Barmeier and Kelsey	2	"	Killing ducks in close season	\$50 each
Bloxson and Keense**	3	Maryland	Hunting geese at night	\$1 each and costs
Fox*	1	Georgia	Killing a flicker	\$5
Hoffman	4	Alabama	Killing doves in close season	\$10 each
Holmes and Cooney**	3	Kansas	Killing ducks in close season	\$100 each and costs
Merrill and Scholler*	2	Illinois	Possessing ducks in storage in close season	\$25 each

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Merrill and Scholler*	1	Illinois	Killing ducks in close season	\$5
Merrill and Soderlund*	1	"	Killing a grebe	\$10
Riddick	2	Missouri	Possessing wood ducks	\$50 each
Shaver and Nordin**	1	Minnesota	Hunting ducks after sunset	\$10
Shupee***	1	Texas	Possessing swan	\$1
"	1	"	Possessing swan	\$5
Smith	1	Maine	Killing a goose	\$40
Steele	1	Oregon	Killing dowitchers and sandpipers	\$25
Tonkin	1	Idaho	Hunting ducks after sunset	\$10
Tonkin and Dean**	2	"	Hunting ducks after sunset	\$25 each
Tonkin and Dean**	1	"	Hunting ducks after sunset	\$50
Visart	2	Arkansas	Killing wood ducks	\$10 each
Visart	1	"	Possessing ducks without permit	\$10 and costs of \$34.55
Whitehead	1	So. Carolina	Killing wood ducks	\$50 and costs
"	5	Georgia	Killing doves in close season	\$10 each
Whitehead and H. G. Rowland*	7	"	Killing doves in close season	\$10 each
Whitehead and Cannon*	12	"	Killing doves in close season	\$20 each

Cases Reported to Solicitor for Prosecution.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Barmeier and Thrasher*	1	Missouri	Possessing ducks in close season
Barmeier and Heller*	1	Illinois	Killing a bullbat (nighthawk)
Bloxson and Jester**	1	Virginia	Shooting at a green heron
Charlton	1	Ohio	Killing ducks after sunset
Farnham and Hilliard	1	Pennsylvania	Killing grebes
Holmes	1	Kansas	Buying, selling, and shipping migratory waterfowl without a Federal permit
Marmouget** and Stein*	1	Louisiana	Selling ducks

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Former U. S. Game Warden



<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Miller	1	Maryland	Killing a coot and bittern
Ransom	4	Idaho	Killing wood ducks
Riddick	2	Missouri	Possessing wood ducks
Smith	2	Maine	Killing great blue heron
Steele	1	Oregon	Killing dowitchers and sand- pipers
Steele	2	Washington	Hunting ducks from airplane
Visart	2	Oklahoma	Killing doves and yellowlegs in close season
Whitehead and Thompson**	1	Florida	Killing bobolinks and shrike
Whitehead and H. G. Rowland*	2	Georgia	Killing doves in close season
Whitehead, Hoff- man, and Clark**	3	Louisiana	Killing ducks and coots in close season

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

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# THE SURVEY

Issued monthly under authorization of the Chief, Bureau of Biological Survey, United States Department of Agriculture, as a medium for furnishing the personnel of the various divisions information regarding the work of the Bureau as a whole.

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No. 12

## GENERAL NOTES

Doctor Nelson returned to Washington on November 25, after an extended trip visiting field offices in the West and conferring with State officials and cooperators. He also enjoyed a short vacation while in California. On November 26-27 he was in New York city conferring with game protective officials and others interested in game conservation.

The Biological Survey was represented at the Tenth National Game Conference of the American Game Protective Association, held in New York City, December 10-11, by Doctor Nelson and the following members of the staff: Messrs. Henderson, Fisher, Goldman, Lawyer, Oberholser, and Denmead. The first day's program included a talk by Doctor Oberholser on "Scientific Views on How Best to Protect Bob-White Quail," and on the second day Doctor Nelson addressed the Conference on "Unwise Drainage." The annual dinner took place on the second evening in the ballroom of the Waldorf-Astoria.

At the meeting held December 6, 1923, at the Academy of Natural Sciences of Philadelphia and the College of Physicians of Philadelphia, to commemorate the centenary of the birth of Joseph Leidy, the Biological Survey was represented by Dr. T. S. Palmer and Dr. H. C. Oberholser. Addresses were presented on Leidy as a paleontologist, as a zoologist, a botanist, a mineralogist, and as a teacher of anatomy.

Ernest Thompson Seton, of Greenwich, Conn., was a visitor in the offices of the Bureau, November 13-14.

Ernest G. Holt, formerly of the Biological Survey, and more recently connected with scientific exploring expeditions and other work in Brazil, renewed old friendships in the Bureau, early in November.

The following publications of the Bureau were received in November:

"Bird Houses and How to Build Them," Farmers' Bulletin No. 609 (Rev.). Received November 12.

"Laws Relating to Fur Animals for the Season 1923-24," by George A. Lawyer and Frank L. Earnshaw, Farmers' Bulletin No. 1387. Received November 23.

"Directory of Officials and Organizations Concerned With the Protection of Birds and Game, 1923," by George A. Lawyer and Frank L. Earnshaw, Department Circular 298. Received November 28.



Among manuscripts submitted for outside publication in November were:

- Bailey, Vernon, "The Prairie Hare, or Northern Plains Jack Rabbit," for Nature Magazine.
- Denmead, Talbott, "Increase of Migratory Birds Under Federal Protection," for the bulletin of the Maryland State Game Department.
- McAtee, W. L., Reviews of "Birds in the Ecology of Spitzbergen and Bear Island" (Summerhayes and Elton), "Economic Ornithology in Recent Entomological Publications," and "Relation of Summer Birds to the Western Adirondack Forest" (Siller), for The Auk.
- McAtee, W. L., and J. R. Malloch, "Flies of the Family Drosophilidae of the District of Columbia Region, with Keys to Genera and Other Notes of Broader Application," for Proceedings of the Biological Society of Washington.
- Malloch, J. R., "Descriptions of Neotropical Drosophilidae (Diptera)" for Proceedings of the U. S. National Museum.
- "A New Species of Amiota (Diptera: Drosophilidae)" for Bulletin of the Brooklyn Entomological Society.
- "A New Genus of Muscidae (Diptera)," for Proceedings of the Entomological Society of Washington.
- "A New Species of the Genus Brachycistus Fox (Hymenoptera: Aculeata)," for Bulletin of the Brooklyn Entomological Society.
- Oberholser, Harry C., "Why the Farmer Should Protect Birds," for Successful Farming.
- Steele, Ray C., "Game Conservation on a Business Basis," for Western Wilds.
- Wetmore, Alexander, and J. L. Peters, "A New Race of Spizitornis parulus," for The Auk.

#### BIOLOGICAL INVESTIGATIONS

Mr. Goldman returned to Washington on November 20 after an absence of about four months. During this trip he completed the State survey work in Arizona and examined collections at Berkeley and Pasadena, Calif. He also visited the States of Washington and Oregon and conferred with various members of the field force of the Bureau, and with a number of cooperators.

Harry Malleis, who has been in British Honduras and Guatemala since last spring collecting live specimens of the ocellated turkey and other large game birds for propagation in the southeastern United States, and making general collections, was last heard from at Flores, Guatemala, early in November. He is expected shortly to reach Belize, British Honduras, where he will embark for the United States.

During the past month the Biological Survey bird collection has been completely rearranged and expanded and is now in systematic order. This rearrangement was made necessary by the accessions of the past several years, including ducks, geese, gulls, and other large water birds, as well as series of grouse and ptarmigan, and smaller birds.

## ALASKA INVESTIGATIONS

Over 1,400 carcasses of reindeer were shipped from Alaska to the United States at the close of the transportation season on the Bering Sea coast in October. Of this number the Lomen Company shipped 1,000.

Allen H. Hardy, Fur Warden, caused the arrest of a party at Anchorage recently for killing a young moose. A plea of guilty was entered and a fine of \$150 imposed.

W. F. Bancroft, in Charge of Fur Bearers in Alaska, visited New York City November 16 and 17, where he conferred with leading fur buyers relative to reporting to the Bureau shipments of skins received from points in Alaska.

L. J. Palmer, Assistant in Charge of Reindeer Grazing Investigations, stationed at Nome, reports that during the summer he and his assistants traveled 2,529 miles on the schooner "Hazel," inspecting reindeer herds along the Bering Sea coast. The distance traveled included a trip of 220 miles to Teller and return as a relief expedition, when a report was received that the schooner "Woods," of San Francisco, was in distress. On arriving at Teller on September 21, the "Woods" was found a hopeless wreck on the beach off Teller Mission.

Jack Warwick, Fur Warden, left Nome by dog team December 2 for his headquarters at Flat. Warden Frank Dufresne, of Nome, left with Mr. Warwick and will accompany him as far as Nulato, going on from there east along the Yukon investigating charges of illegal trapping.

## ECONOMIC INVESTIGATIONS

S. P. Young, of the Colorado district, and J. S. Ligon, of the New Mexico district, held a conference at Albuquerque, October 25, to perfect plans regarding cooperative work along the Colorado-New Mexico border. Among other things it was decided that the wolves which range back and forth over the line would be systematically hunted.

Troy C. Beach was appointed field assistant, October 16, to assist Louis Knowles in supervising the hunters of the South Dakota district.

In comparing the State and Federal hunter records with the bounty records, it was found that the hunters in Chippewa County, Mich., were taking almost as many coyotes and wolves in one month as were turned in by bounty hunters in a year.

The first predatory animal taken in the organized cooperative work in Missouri was a wolf caught by Hunter Clyde Briggs in Oregon County, September 7.

Serious losses to the Angora goat industry have been experienced through the Ozark country for many years. Hunter Chris Hoover placed his camp at the foot of "Dewey Bald," in Stone County, Missouri, to make a thorough clean-up of the old offenders. E. F. Pope reports his success as follows: "Mr. Hoover is a hard and faithful worker and it was, therefore, with considerable disappointment that we noted his failure to report any wolves until almost the end of the



month. The reason for this he made clear to me on my recent visit to the locality. Thinking, of course, that the wolves traveled true to form, Mr. Hoover gave his attention to the trails along the crests of the hills. He could find no signs, but attributed this, at least in part, to the extremely flinty character of the hills. About once a week a wolf would howl on the mountains not far away. By sitting up nights and listening attentively, Mr. Hoover located the route used by this wolf in coming and going and found that it was along the narrow flat ledges, instead of on the stock trails on the 'hog-backs,' and then it was a comparatively simple matter to capture the animal, which proved to be an old female. Bounty hunters, so I was informed, have taken a litter of pups annually from this old wolf for the past four or five years. No doubt considerable disappointment was felt in that quarter over her capture."

Carlyle Carr returned to Washington, November 26, after spending two weeks giving demonstrations and talks on rodent control in Massachusetts and New Jersey. A meeting near Waltham, Mass., was attended by 75 people, and a group of 72 farmers were present at another at Sussex, N. J. Preliminary work was done by Mr. Carr in arranging for the organization of a rat campaign in Farnstable County, Mass., three county campaigns in New Jersey near New York City, and one city campaign at Trenton, N. J. Mr. Carr returned to New Jersey December 10 to organize the work.

W. A. Mullins, a hunter of the Oklahoma-Arkansas-Missouri district, during the latter part of October dealt a knockout blow to a bunch of wolves which had long been a terror to stock raisers along the Arkansas-Oklahoma border, by accounting for six of the animals. Inspector Pope, who spent a few days with Mr. Mullins, poisoned two large wolves. Six more were found and reported by stockmen, making a total of 14 killed on an area about 10 miles square. It is believed that the whole pack was wiped out.

During October, C. E. Gillham, a hunter of the Arizona District, poisoned a notorious white wolf which had ranged on the desert northwest of Phoenix for the past nine years. At one time there was a bounty of \$500 on this animal which a great many hunters tried to get without success.

L. L. Laythe, in charge of rodent work in California, attended the Los Angeles County Fair, at Pomona, October 16-20. The Biological Survey exhibit was pronounced by many one of the best on the grounds.

R. E. Bateman reports that the sportsmen in the vicinity of Hamilton, Mont., have expressed their appreciation of the excellent lion work which has been done under the direction of the Bureau on the Upper Bitter Root and Skalkaho Creeks. They state that there has been a great increase in deer in the past year.

An outstanding feature of the rodent work in Idaho is an extensive campaign for the destruction of pocket gophers in Ada, Bannock, and Bingham Counties. The area included in the cleanup campaign in Bingham County involves approximately 35,000 acres. The work is being conducted under provisions of the Idaho rodent control law, which will insure the treating of all infested land within the designated area.



During October, W. C. Echols, a hunter of the New Mexico district, took a pack of five wolves which had ventured across the border from Mexico. All were killed before they had time to commit serious depredations.

A. E. Gray, in charge of rodent work in New Mexico, recently inspected 25,000 acres of land in Lea County, which had been treated for the control of prairie dogs during 1919-20. It was found that permanent control was effected on 10,000 acres of the tract, and the old chimneys are now hidden by a rank growth of gramma grass.

Roy Fugate, of the Oregon district, during October organized a pocket-gopher campaign in the vicinity of Monmouth, in the course of which 3,045 acres were treated.

W. F. DeLong, a hunter working in Kennedy County, Texas, made one of the record catches of this year, taking 75 coyotes and 3 bobcats; Hunter Joe Smith, in Maverick County, took 10 bobcats, 25 coyotes, and 1 mountain lion.

The Washington State Sportsmen's Association at their annual meeting in Yakima, October 28-29, passed a resolution indorsing the work of the Biological Survey in that State in control of predatory animals and enforcement of the migratory bird treaty act.

A careful inspection in Cochise County, Arizona, showed about 200 prairie dogs in eight different areas ranging from one to thirty acres. A total of 80 acres was occupied. Four years ago in this county there were over 500,000 acres infested by a total prairie dog population of over 5,000,000. The 200 which were located during October were exterminated by gas and no one knows of a prairie dog in Cochise or Graham County at this time.

Hunter W. H. Caywood took the last of the predatory bears which had been killing cattle north of Dotsero, Colo. One of these was a male brown bear weighing about 850 pounds, with one of the hind legs missing. This made it easy to identify his tracks around the carcass of the last steer killed by him.

To control orchard mice in Washington 7,500 pounds of poisoned grain have been mixed.

Mike Loshaw, one of the Michigan hunters, took a large black timber wolf in Ontonagon County. This species is very rare in the State.

James Silver returned November 19 from southeastern Florida, where he has been engaged in directing a campaign against land crabs in cooperation with the Extension Division of the State College of Agriculture. There has been a great deal of interest in the control of these unusual and interesting pests for a number of years. They first engaged the attention of the Biological Survey in 1916, and at that time R. T. Jackson spent a month in the vicinity of Miami carrying on experiments. The crabs occupy the low-lying lands near the coast, where they dig burrows much like those of a crawfish, except that the chimneys are much less pronounced and the average size is much greater, sometimes reaching a diameter of 6 inches or more. The greatest single damage is to tomatoes, which are grown on the low glades, or prairies,

near the coast. The bulk of the nation's winter supply of tomatoes, about 2,000,000 crates, is raised on these low-lying glades in Dade County. Such lands normally support a land crab infestation of about 5,000 per acre, which must be materially reduced in order to make the raising of tomatoes possible. The method of control commonly employed is poisoning with a phosphorous paste, using bran mash, young tomato plants, or paper as bait. The cost of this treatment, on account of low efficiency, runs from \$10 to \$40 per acre, while the cost of treatment by the methods advocated during the present campaign runs from \$5 to \$12 per acre. This latter method was widely demonstrated, and sufficient carbon bisulphide was distributed to treat one million crab burrows, so that a substantial saving has already been effected.

A. M. Day, of the Wyoming district, reports that through C. L. Corkins, State Bee Inspector, several pounds of poison have been distributed for the control of field mice about the cases where bee colonies are packed during the winter months. Due to the severe weather conditions in this State, it has been found advisable to place one or more colonies in large cases and pack the lower edges with straw. Field mice nest in the straw, enter the cases and hives, and destroy much of the honey comb. A small can of poison will be placed at the entrance of each hive in an attempt to prevent such depredations this winter. If successful, this practice may soon become common in packing the bees for the winter.

#### GAME AND BIRD RESERVATIONS

Ludwig Bethel, warden of the Tortugas Keys and Key West Reservations, Florida, states in a recent report that he has noted a marked decrease in the number of mourning doves, known locally as wood doves.

The latest report from the Elk Refuge in Wyoming advises that the elk herds are still far back in the mountains.

L. E. Hibbard, supervisor of the Lake Malheur Reservation, stationed at Burns, Oreg., reports that on November 1 the birds were leaving rapidly for the south, although there was still plenty of open water and feed in that valley. He said that the ravens were certainly 100 per cent more numerous during the autumn than ever before. At that time none of them, apparently, had migrated, and they were very numerous right in the town of Burns. Warden Benson reports that there are thousands of geese at Lake Malheur Reservation - more than have been there for years.

Wm. E. Brooks, warden of the Dungeness Spit Reservation, Washington, reports that ducks are at the refuge in great numbers. There are many teals, pintails, and widgeons, large numbers of canvasbacks, and more mallards than usual. Brant were coming in at the time the report was made.

At the Conconully Bird Reservation, Washington, about 200 mallards and 300 other species of ducks, such as redheads, blackjacks, teals, and pintails were noticed during November. No geese were seen by Warden Conger at the refuge during the autumn. A few great blue herons and rails were there early in November.



Plenty of ducks are reported at Belle Fourche Reservation, South Dakota, this season, but very few geese, although Warden G. M. Wilson informs us there are more Canada geese at the refuge than he has noticed there in previous years. On the north side of the lake at this refuge, Paul Bernard has 37 antelope in a pasture where he is protecting them. They are reported to be quite tame.

A great many northern ducks and some geese are reported by Warden McDaniel at North Platte Reservation, Nebr.

An order prohibiting the use of any kind of a headlight on Big Lake Reservation, Arkansas's, was issued by the Acting Secretary of Agriculture on November 16, in order to prevent unnecessary disturbance of the birds as far as possible. W. C. Griffin is assisting Warden L. L. Bryan in patrolling Big Lake Reservation during the hunting season. A great many ducks are at this refuge.

The sympathy of the Bureau is extended to Miss Ethel N. Jett, of this division, in the death of her sister, Miss Mary Jett, on November 19.

#### IMPORTATIONS

Shipments received at the port of New York during the month of November averaged about one a day. The total number of birds included several rare species from Venezuela; among these were two guans, five dwarf macaws, and one Bodin parrot.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS

E. J. Thompson, Assistant in Operations, visited Beaumont, Tex., the latter part of November, where he was subpoenaed as a Government witness in a Treaty-Act case involving the sale of wild ducks by a leading hotel.

On a charge of transporting ducks in excess of the weekly bag limit, an offender in the Federal court at Norfolk, Va., on November 9 was fined \$475 and warned that if again brought before the court on a similar charge a jail sentence would be imposed. This was the violator's second offense, to both of which he pleaded guilty. The evidence in each instance was obtained by Warden Birsch.

Warden Kelsey had a successful day on October 21 on Lake Poinsett, South Dakota, when he apprehended 16 gunners engaged in hunting ducks after sunset, and obtained signed admissions of guilt from all. The cases will be recommended for Federal prosecution.

In 12 cases involving the killing of mourning doves in close season, obtained by Warden Whitehead, the court assessed fines of \$10 each and costs on November 21, at Rome, Ga. In 11 of the cases Mr. Whitehead was ably assisted in securing the evidence by Deputy H. G. Rowland. All of the violators pleaded guilty.

Warden Linebaugh, who has been ill since the latter part of September, is slowly recovering. It is still very difficult, however, for him to get around without assistance. He hopes to be able to return to work about the



first of January. On behalf of the field force and this office we express the hope that he may have a speedy recovery.

Warden Mushbach, writing from Billings, Mont., states that the goose flight this year is unprecedented. He says the geese are not only passing through, but that many of them have been remaining and feeding in the grain fields for several weeks past. Mr. Mushbach made this observation on November 24.

Warden Hilliard reports immense quantities of wild ducks on the Delaware River. He states in part as follows: "The Delaware River was packed from shore to shore for at least ten miles. This is as far as we went down the river and we could see them (wild ducks) as far as the eye could reach. \* \* \* I never saw as many ducks before in my life. They were mostly black ducks, mallards, and pintails. Along the Alloway Creek marshes I saw a big lot of Wilson snipe."

Frank S. Miller, formerly U. S. game warden, with headquarters in Washington, D. C., has been transferred to the Office of Inspection of the Department, effective November 21.

The following appointments were made to the position of U. S. Deputy Game Warden during November:

Richard E. Herweck, 6647 Waterman Ave., St. Louis, Mo.  
Summerfield Wilson, Havre de Grace, Md.  
Elmer E. Bennett, 317 North Stoke St., Havre de Grace, Md.  
John B. Fahey, 1930 Grace St., Dubuque, Iowa.  
George B. Rison, 401 Cumberland St., Little Rock, Ark.  
Lloyd Claussen, De Valls Bluff, Ark.  
Stephen Creech, 3421a Juniata St., St. Louis, Mo.  
Octavius Hopkins, Crescent, Ga.  
Joseph R. Wallace, Long Island, Me.

Appointments of the following U. S. Deputy Game Wardens were terminated during November:

Geo. W. Courtright, Quincy, Calif.  
James S. White, Redding, Calif.  
Fred Sandham, Gilmore City, Iowa.  
Robert Messa, St. Bernard P. O., La.  
Lyman G. Fitzgerald, 24 Fifteenth Ave., Columbus, Ohio.  
Walter J. Howard, Opelika, Ala.  
Harry A. Andersen, Davenport, Iowa.

Migratory Bird Treaty Act Cases Terminated - Reports Received During November.

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>	<u>Fine</u>
Parmeier	1	Missouri	Possessing ducks in close season	\$50
Beckwith*	1	Iowa	Killing ducks in close season	\$30
Birsch	1	Virginia	Transporting more than weekly limit of ducks	\$475
Bloxson	1	"	Killing an egret	\$10
"	1	"	Killing curlews and terns	\$25
Bloxson and Jester**	1	"	Exceeding bag limit on brant	\$50
Bloxson and Derrickson**	1	"	Killing green herons	\$25
Heller*	1	Missouri	Hunting ducks after sunset	\$1
Hoffman	1	Alabama	Killing ducks after sunset	\$5
Linebaugh	2	Tennessee	Killing wood ducks	\$10 each and costs
Merrill and Scholler*	1	Illinois	Possessing ducks in storage in close season	\$25
Merrill and Scholler*	1	Iowa	Killing ducks in close season	\$50
Steele and Russell**	1	Oregon	Hunting ducks after sunset	\$5
Whitehead	1	Georgia	Hunting doves half an hour before sunrise	\$10 and costs
Whitehead and H.G.Rowland*	11	"	Killing doves in close season	\$10 each and costs

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

Cases Reported to Solicitor for Prosecution

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Parmeier and Thrasher*	1	Missouri	Selling ducks
Parmeier	1	"	Possessing ducks in close season
Black**	1	Michigan	Hunting ducks after sunset
Bloxson	2	Delaware	Hunting ducks after sunset
Bloxson and Dillahay**	2	"	Hunting ducks after sunset
Charlton and Stone*	1	Michigan	Hunting ducks prior to half an hour before sunrise
Charlton and Harrison*	1	West Virginia	Hunting ducks from motorboat; shooting at grebe
Farnham and Hilliard	2	Pennsylvania	Killing grebes
Hilliard and Pierce*	5	New Jersey	Hunting ducks after sunset

<u>Warden</u>	<u>Cases</u>	<u>State</u>	<u>Violation</u>
Hoffman	1	Alabama	Killing ducks after sunset
Holmes	7	Missouri	Hunting ducks after sunset
Holmes and Sellers*	1	Louisiana	Selling ducks
Kelsey	5	South Dakota	Hunting ducks after sunset
Perry and Dickerson*	4	Tennessee	Hunting ducks in close season and from motorboat
Smith	2	New Hampshire	Hunting yellowlegs after sunset
"	2	Maine	Killing wood ducks and hunting after sunset
"	3	"	Hunting ducks after sunset
Stadlmeir	1	Massachusetts	Hunting ducks prior to half an hour before sunrise
Stadlmeir	1	Rhode Island	Killing a grebe
Steele, R. C.	2	Washington	Hunting ducks after sunset
Steele, O. D.	1	Iowa	Hunting ducks after sunset and shooting at a grebe
"	2	"	Hunting ducks after sunset
"	1	"	Hunting ducks with an 8 gauge gun
Tribou*	1	Massachusetts	Hunting ducks prior to half an hour before sunrise
Visart and Cochran*	1	Arkansas	Killing ducks in close season
Whitehead	1	Georgia	Purchasing a goose
"	1	"	Killing geese in close season
Whitehead and J.B. Rowland*	2	So. Carolina	Killing wood ducks
Whitehead and Mills***	1	Georgia	Purchasing a goose

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Constable

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